The Level Descriptions *Manual*

A learning outcomes approach to describing levels of skill in **Communications & Numeracy**

As well as features and example performance indicators for the domain of **Self-Management & Self-Direction**

OLC
Ontario Literacy Coalition

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The Level Descriptions Manual was developed by the following people:

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Introduction

The Levels Description Manual: Introduction

Background

In January of 1999, Ontario Literacy Coalition began work on the level descriptions project. The goal of this Ministry of Training, Colleges, and Universities (MTCU) and National Literacy Secretariat (NLS)-funded project was to provide a holistic perspective to the description of skills for reading and writing that are detailed in MTCU's Literacy and Basic Skills (LBS) document, *Working with Learning Outcomes (1998)*.

At the time, many literacy practitioners were attempting to create overall descriptions or **summary statements** for each of the five LBS levels of skill for the learning outcomes: *Read with Understanding for Various Purposes* and *Write Clearly to Express Ideas*. A project that could provide focused professional work on developing descriptions of the LBS levels to be used consistently across the province was needed.

The level descriptions project for reading and writing involved a team of three literacy practitioners and one educational consultant from January 1999 to April 1999. From April to June of that year, Ontario Literacy Coalition delivered training in assessment, part of which included training in using the level descriptions for reading and writing.

The assessment training proved successful, and many people in the field requested level descriptions for the remaining learning outcomes as detailed in the *Working with Learning Outcomes (1998)* document. In January of 2000, three teams of experienced literacy practitioners and consultants were formed to work on developing level descriptions and material for each outcome in the numeracy domain, for the *Speak and Listen Effectively* outcome of the communications domain and for the self-management and self-direction domain. MTCU provided guidance for the project and a wide range of representatives from the literacy field provided feedback on each draft.

This manual is the product of both the 1999 and the 2000 level descriptions projects.

How The Level Descriptions Manual Can Be Used

The Level Descriptions Manual is based on the skills listed in the matrix of *Working with Learning Outcomes (1998)* and is intended as a complement to that document. Both

documents consist of the same content but are organized differently to serve different functions. *Working with Learning Outcomes (1998)* provides a very detailed list of skills at the "atomistic" and "analytic" level of assessment, meaning that the focus is on detailed and discrete aspects of performance. The matrix in *Working with Learning Outcomes (1998)* may be used when a high level of detail is desired (e.g., for some types of assessment, program planning, or curriculum analysis). The Level Descriptions Manual provides a way to describe programming and assessment results more holistically, with a focus on important features and performance indicators. Literacy practitioners' knowledge of the purpose of assessment and the learners' needs will help to inform their tool selection.

The summary statements in The Level Descriptions Manual provide literacy assessors and learners with a summary of skills for each level of the communications outcomes of *Read with Understanding for Various Purposes* and *Write Clearly to Express Ideas* as well as each outcome in the numeracy domain.

The summary statements also present LBS program content in a way which can be easily understood by people outside LBS-funded agencies. Ontario Works counselors, employers, and local training and adjustment board members, for example, are very interested in generally understanding what LBS programs help learners to achieve, but they usually do not need the level of detail which is more useful to a learner or a literacy practitioner.

While the development of *Working with Learning Outcomes (1998)* involved the input of the literacy field, it is based on the learning outcomes of the Ontario Curriculum, grades 1–8. The content of The Level Descriptions Manual was linked more closely to an adult learning context. The combination of educational consultants and adult literacy practitioners working on the level descriptions teams enhanced the teams' understanding of the connection between the skills listed in the matrix of *Working with Learning Outcomes (1998)* and the Ontario Curriculum grade levels. Keeping in mind common principles and practices of adult learning as well as their own experiences as adult literacy practitioners, the teams made appropriate decisions on the development of features and performance indicators for the level descriptions, which meant synthesizing and/or expanding some markers and skill sets from the matrix of *Working With Learning Outcomes (1998)*.

Although the purpose and organization of the two documents are different, both provide literacy workers with valid and compatible means to help implement a learning outcomes approach in their programs (an approach which stresses the integration and application of acquired skills). Practitioners are encouraged to use both *Working with Learning Outcomes (1998)* and The Level Descriptions Manual according to the assessment and program needs of their learners and their agencies.

Component Learning Outcomes in The Level Descriptions Manual

The Level Descriptions Manual includes the same domains and component learning outcomes as those listed in the matrix of *Working with Learning Outcomes (1998)* although two revisions have been made. These revisions are explained below.

Component Learning Outcomes

In both the domain of numeracy and the domain of self-management and self-direction, two component learning outcomes have been integrated to create one component learning outcome in The Level Descriptions Manual:

Domain	Component Learning Outcome in Working with Learning Outcomes (1998)	Component Learning Outcome in The Level Descriptions Manual
Communications	Read with Understanding for Various Purposes	Read with Understanding for Various Purposes
	Write Clearly to Express Ideas	Write Clearly to Express Ideas
	Speak and Listen Effectively	Speak and Listen Effectively
Numeracy	Perform Basic Operations with Numbers	**Use Number Sense and Computation**
	Use Patterning and Algebra	
	Use Measurement for Various Purposes	Use Measurement for Various Purposes
	Solve Geometric Problems	Solve Geometric Problems
	Manage Data and Probability	Manage Data and Probability
Self-Management and Self-Direction	Become a Self-Directed Learner capable of Achieving the Best Results Possible in Work and Personal Life	**Become a Self-Directed Learner**
	Set, Monitor, and Revise Goals	

The synthesis of these outcomes was made for clarity and ease of use and is explained further in the introductions of the numeracy and the self-management and self-direction domains.

Summary Statements, Features, and Performance Indicators

Within each component learning outcome, The Level Descriptions Manual provides practitioners with a synthesis and/or an elaboration of the skills that are detailed in the matrix of *Working with Learning Outcomes (1998).*

For each component learning outcome[1], the major work of the level descriptions project involved these three aspects:

- **The development of summary statements** for each component learning outcome of numeracy and the following component outcomes of the communications domain: *Read with Understanding for Various Purposes* and *Write Clearly to Express Ideas*.

- **The development of features** for each outcome, based on a synthesis and elaboration of the skill sets for each outcome.

- **The development of performance indicators** for each feature, based on a synthesis and elaboration of the success and transition markers of the skill sets.

Corresponding Terms:

Working with Learning Outcomes 1998	The Level Descriptions Manual
Domain	Domain
Component Learning Outcome	Component Learning Outcome
	Summary Statements
Skill Sets	Features
Success and Transition Markers	Performance Indicators

The Development of Summary Statements

Summary statements were developed for each LBS level of these component learning outcomes:

- Read with Understanding for Various Purposes
- Write Clearly to Express Ideas
- Use Number Sense and Computation
- Use Measurement for Various Purposes
- Solve Geometric Problems
- Manage Data and Probability

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1. Summary statements for each level have not been included in this manual for the outcomes *Speak and Listen Effectively* or *Become a Self-Directed Learner.* This is explained in more detail in the introductions to those sections.

The summary statements integrate the features of each outcome at each level, resulting in a summary of skills that can be used to articulate skill levels on training plans, to learners, and to stakeholders outside LBS-funded agencies.

Example Summary Statement

Write Clearly to Express Ideas   Level One

The writer writes for some specific, personally relevant purposes, using a few simple forms and sentences, a familiar vocabulary, and some basic grammar, punctuation and spelling.

The Development of Features

The Level Descriptions Manual also includes **features** for each component learning outcome, which capture the essential aspects of each outcome. Using the skill sets listed in the matrix of *Working with Learning Outcomes (1998)* as a base, the project workers attempted, where appropriate, to synthesize and then expand the skill sets to reflect the features of each component learning outcome and to show the way in which these skills are actually used. For example, for the component learning outcome, *Read with Understanding for Various Purposes,* the key elements of the skill sets "Decoding Skills" and "Comprehension Enhancement Skills" have been synthesized to create the Feature "Using Reading Strategies". Articulating skills using features should prove more meaningful and useful for practitioners when assessing demonstrations of skills, for the features present a more adult-appropriate, integrated approach to skills assessment.

The Development of Performance Indicators

Within each feature, important skills are identified through performance indicators, which are based on the success markers and transition markers of the *Working with Learning Outcomes (1998)* document. In many cases, the development teams found that the detailed success and transition markers of *Working with Learning Outcomes (1998)* suggested an important element of communication that needed to be generalized into a skill or strategy and represented across all levels. In some cases, the markers did not follow clearly from one level to another, presenting gaps and inconsistencies. The performance indicators were developed with the goals of ensuring that they were clearly worded and consistent and that they reflected an increasing complexity across all five levels.

The Development of Examples

Examples were developed for the *Speak and Listen Effectively* outcome and each outcome of the numeracy domain to correspond to the features of those outcomes. The examples are meant to help contextualize the features and performance indicators at each of the five levels and to give practitioners ideas for possible learning activities and demonstrations related to the corresponding skills.

Features, performance indicators, and examples for each outcome were created with the intention of maintaining the integrity of a learning outcomes approach, respecting the principles of adult learning, and facilitating the move to common assessment by creating material that is clear, consistent, and easy to use for practitioners.

A Common Understanding of Assessment

The Level Descriptions Manual should help practitioners and programs in the move toward a common understanding of assessment results. As the level descriptions are based on the content of *Working with Learning Outcomes (1998)*, they offer a common language for practitioners to describe learner achievements and skill levels. It is hoped that practitioners will continue to work toward a shared perspective of skill levels and that this tool will help increase the consistency of assessment, in terms of common evaluation of levels, across programs. Through the use of tools such as this one, a body of assessment evidence can be collected and a shared understanding of good assessment practices and evaluation of skill levels can develop.

Communications

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THE LEVEL DESCRIPTIONS MANUAL

General Overview

The level descriptions for *Read with Understanding for Various Purposes* identify the knowledge and skills demonstrated at each of the five LBS levels of reading. The level descriptions are based on the skills detailed in the matrix of *Working with Learning Outcomes (1998)*.

For each level, the level descriptions for *Read with Understanding for Various Purposes* contain **summary statements** describing overall level of achievement in reading, **features** that identify the important aspects of reading skill, and **performance indicators** that present a guide for a more detailed assessment of reading skill performance.

How the Level Descriptions for *Read with Understanding for Various Purposes* Can Be Used

Literacy practitioners are encouraged to use the level descriptions for *Read with Understanding for Various Purposes* as well as the matrix of *Working with Learning Outcomes (1998)* in their work, making decisions based on the needs of each learner and the context of each situation.

The matrix of *Working with Learning Outcomes (1998)* is best used when a high degree of detail is desired. The level descriptions are most useful when a synthesized description of performance of skill is required. The features of the level descriptions present an integrated skills listing and the summary statements present the most integrated description of reading skills.

The level descriptions may be useful when initially assessing the reading skills of a learner, when developing a training plan, when creating learning activities, or when assessing a learner's progress toward his or her goal through demonstration activities involving reading.

As with the other outcomes in The Level Descriptions Manual, practitioners should choose only those features and performance indicators for reading that are relevant to a learner and his/her goal.

The Development of Summary Statements

The summary statements for *Read with Understanding for Various Purposes* provide the broadest descriptions of learner performance at each level. Each summary statement combines all four features of writing to further synthesize and summarize the characteristics of reading at each level of skill.

The summary statements at each level describe the learner's overall ability to locate, understand, and interpret information and ideas, using strategies and forms and conventions of text to accomplish this. Each statement describes the integration of the features of **reading strategies**, **forms and conventions**, **comprehension**, and **interpretation** to provide a holistic view of each reading level.

This holistic approach adds a new dimension to assessment and can be used as a complement to the skills listing of the matrix of *Working with Learning Outcomes (1998)*.

The Development of Features

The level descriptions for *Read with Understanding for Various Purposes* describe the features, or primary traits, of reading. The four features of reading: **reading strategies**, **forms and conventions**, **comprehension**, and **interpretation** identify the elements which are needed for clear and effective reading and are based on the skill sets of the matrix of *Working with Learning Outcomes (1998)*. The features have been developed based on a meaningful reworking of the skill sets, involving both a synthesis in some areas and an expansion of features in others.

The table opposite compares the skill sets for reading in the matrix of *Working with Learning Outcomes (1998)* to the features for reading in The Level Descriptions Manual.

Outcome: *Read with Understanding for Various Purposes*	
Working with Learning Outcomes (1998)	The Level Descriptions Manual
Skill Sets	**Features**
Decoding skills	Reading Strategies
Comprehension enhancement skills	
Read to find information and for research	Forms and Conventions
Describe types of text and demonstrate an understanding of form and style	
Read and comprehend	Comprehension
Read and retell	
Read and interpret	Interpretation

The seven skill sets of *Read with Understanding for Various Purposes* in the matrix of *Working with Learning Outcomes (1998)* have been synthesized into four features in The Level Descriptions Manual. As well, the features have been expanded to include items that were not covered in *Working with Learning Outcomes (1998)*, such as characteristics of the text under **forms and conventions** (text is familiar with everyday content-level 1; text has levels of meaning and interpretation—level 4). The features provide a higher integration of skills than what is found in the matrix of *Working with Learning Outcomes (1998)*, which should aid practitioners in the assessment of skills in demonstrations.

The Development of Performance Indicators

The performance indicators for *Read with Understanding for Various Purposes* have been developed based on a reworking of the success and transition markers of the matrix of *Working with Learning Outcomes (1998)*. In various places, this reworking involved synthesizing or elaborating skills to create useful performance indicators that are clear and consistent across levels and that reflect adult learning.

In many cases, the detailed success and transition markers of the matrix of *Working with Learning Outcomes (1998)* suggested an important element of communication that needed to be generalized into a skill or strategy and represented across all levels. In some cases, the markers did not follow clearly from one level to another, presenting gaps and inconsistencies. The performance indicators for *Read with Understanding for Various Purposes* were developed with the goals of ensuring that they were clearly worded and consistent and that they reflected an increasing complexity across all five levels of adult literacy.

• Summary Statements •

Level One

The reader locates, understands and responds to simple, concrete ideas and sequential information in graphics, sentences, and very short, simple texts about familiar topics. To do this, the reader uses basic reading strategies, personal experience and familiarity with some common forms and conventions of simple texts.

Level Two

The reader locates, understands, and begins to interpret concrete and some inferential meaning in short, uncomplicated texts about familiar topics. To do this, the reader uses various common reading strategies, personal experience, and knowledge, as well as familiarity with some forms and conventions of more formal texts.

Level Three

The reader locates, understands, interprets, and makes judgements about ideas and information in a variety of texts that have some complexity of content and form. To do this, the reader uses a variety of more advanced reading strategies, personal experiences and knowledge and a familiarity with a variety of forms and conventions of formal texts.

Level Four

The reader analyzes, synthesizes, makes reasoned judgements, and draws conclusions about ideas, information and the writer's perspective in texts that are complex in form and content. To do this, the reader uses a wide variety of reading strategies, personal experiences and knowledge as well as familiarity with a wider variety of forms and conventions, including some stylistic elements.

Level Five

The reader analyzes, synthesizes, makes reasoned judgements, and draws conclusions about ideas and information, including the writer's perspective and bias, and the use and impact of stylistic devices in texts that are complex in form, content, and style. To do this, the reader uses a wide range of appropriate and efficient strategies, including a deeper application of personal experiences and knowledge and a familiarity with complex forms and conventions, including stylistic conventions.

Read with Understanding for Various Purposes   Level 1

Summary Statement

The reader locates, understands and responds to simple, concrete ideas and sequential information in graphics, sentences, and very short, simple texts about familiar topics. To do this, the reader uses basic reading strategies, personal experience and familiarity with some common forms and conventions of simple texts.

Description of Level One by Feature

Features	Performance Indicators
Reading Strategies	• Uses knowledge of alphabet and basic phonics to decode common words • Uses knowledge of basic grammar, predictable word patterns, and basic sentence structure in speech to understand phrases and sentences • Uses knowledge of basic spelling conventions and simple punctuation • Uses context cues and personal experience to gather meaning form the text • Scans simple text for familiar words • Uses pictures and illustrations to determine meaning of unfamiliar words and gather information about the text
Forms and Conventions	• Demonstrates basic awareness of familiar forms of writing by identifying how different kinds of materials are organized (e.g., simple schedules, charts, menus, personal letters, job ads) • Uses alphabetical order and basic conventions of formal texts (e.g., book titles) to locate information • Reads text of one paragraph (or a few short paragraphs) or a list of sentences • Text is familiar with everyday content with personal relevance • Text has simple, concrete information in simple, familiar wording
Comprehension	• Retells a simple story or event in order • Reads symbols and common sight words from everyday life • Follows simple pictorial instructions
Interpretation	• Expresses thoughts and feelings about stories and events • Predicts what may happen in a story; revises or confirms predictions

Summary Statement

The reader locates, understands, and begins to interpret concrete and some inferential meaning in short, uncomplicated texts about familiar topics. To do this, the reader uses various common reading strategies, personal experience, and knowledge, as well as familiarity with some forms and conventions of more formal texts.

Description of Level Two by Feature

Features	Performance Indicators
Reading Strategies	• Uses phonics and knowledge of word parts to decode more easily • Uses knowledge of basic grammar, predictable word patterns, and sentence structure in writing to understand phrases and sentences • Uses knowledge of basic spelling conventions and simple punctuation • Uses context cues and personal experience to gather meaning from the text • Scans to find simple information • Uses pictures and illustrations to gather information about the text
Forms and Conventions	• Demonstrates knowledge of more forms of writing (fiction vs. non-fiction) and uses that knowledge as a guide in reading (though not always able to read all of the located information) • Uses various conventions of formal texts (e.g. simple charts and maps, dictionaries) to locate and interpret information • Reads text: one page of short paragraphs • Text is familiar, with everyday content and personal and/or general relevance • Text has concrete information in familiar, concrete wording; some simple inferential meaning
Comprehension	• Identifies the topic and purpose of a piece of writing • Identifies the main idea and supporting details • Follows simple written instructions
Interpretation	• Begins to consider ideas from reading in development of own opinions • Distinguishes between fact and opinion in text • Begins to make simple inferences • Expresses thoughts and feelings about ideas in a piece of writing

Summary Statement

The reader locates, understands, interprets, and makes judgements about ideas and information in a variety of texts that have some complexity of content and form. To do this, the reader uses a variety of more advanced reading strategies, personal experiences and knowledge and a familiarity with a variety of forms and conventions of formal texts.

Description of Level Three by Feature

Features	Performance Indicators
Reading Strategies	• Uses a variety of strategies (patterns of word structure, root words, prefixes and suffixes) to decode and determine the meaning of unfamiliar words • Uses knowledge of more detailed elements of grammar, language structures, spelling and punctuation to understand phrases and sentences • Draws on personal experience and on reading experience to gather meaning from the text • Adjusts reading speed • Skims to understand type of text; scans to find specific information • Begins to take notes
Forms and Conventions	• Demonstrates a wider knowledge of various forms of writing such as articles, editorials, or short essays from resources including newspapers, magazines, books, the Internet, and computer CDs • Uses various conventions of formal texts to locate and interpret information (headings, index, parts of a letter, reference materials) • Begins to select appropriate materials for different purposes • Reads text of a number of paragraphs; gathers information from graphs and tables • Text is within the interest of the reader with personal and/or general relevance • Text has a combination of concrete and inferential meaning, some of it complex, some unfamiliar vocabulary
Comprehension	• Identifies the topic and purpose of a piece of writing • Identifies the main idea and supporting details • Follows written instructions
Interpretation	• Makes judgements (predictions, conclusions) using evidence from the text • Makes inferences • Begins to identify a writer's point of view • Considers ideas form reading in the development of own opinions • Recognizes how one's own attitude may influence interpretation

Summary Statement

The reader analyzes, synthesizes, makes reasoned judgements, and draws conclusions about ideas, information and the writer's perspective in texts that are complex in form and content. To do this, the reader uses a wide variety of reading strategies, personal experiences and knowledge as well as familiarity with a wider variety of forms and conventions, including some stylistic elements.

Description of Level Four by Feature

Features	Performance Indicators
Reading Strategies	• Uses a variety of more complex strategies (word origins and derivations) to decode and determine the meaning of new vocabulary independently • Uses knowledge of elements of more complex grammar, language structures, spelling, punctuation, and some stylistic devices to understand phrases and sentences • Draws more deeply on personal experiences and on a wider variety of reading experiences to gather meaning from the text • Skims to get an overview of the content; scans to find specific information • Organizes and records key points in order
Forms and Conventions	• Demonstrates a knowledge of elements and style in a variety of forms of writing • Uses a variety of conventions of formal texts (index, appendices, graphs, tables, footnotes and more complex reference resources) to locate and interpret information for a variety of purposes (simple research) • Reads independently from a variety of materials but may require help choosing reading material for a specific purpose • Reads a text of many paragraphs • Text contains complex subject matter with personal and/or general relevance • Text has levels of meaning and interpretation and a number of unfamiliar words
Comprehension	• Identifies the main idea and purpose in writing • Cites details that support the main idea • Follows increasingly complex written instructions
Interpretation	• Continues to make judgements based on evidence • Makes more complex inferences • Identifies a writer's perspective; distinguishes between logical and illogical arguments, objectivity and prejudice • Develops and clarifies own points of view by examining the ideas of others

Summary Statement

The reader analyzes, synthesizes, makes reasoned judgements, and draws conclusions about ideas and information, including the writer's perspective and bias, and the use and impact of stylistic devices in texts that are complex in form, content, and style. To do this, the reader uses a wide range of appropriate and efficient strategies, including a deeper application of personal experiences and knowledge and a familiarity with complex forms and conventions, including stylistic conventions.

Description of Level Five by Feature

Features	Performance Indicators
Reading Strategies	• Uses a wide variety of complex strategies (knowledge of word origins and derivations and word analysis techniques) to decode and determine the meaning of unfamiliar words independently • Uses knowledge of elements of complex grammar, language structures, spelling, punctuation, and numerous stylistic devices (e.g., symbolic language) to understand phrases and sentences • Draws more deeply on personal experiences and on a much wider variety of reading experiences to gather meaning from the text • Selects appropriate reading strategies (skimming, scanning) • Organizes and records key points in order
Forms and Conventions	• Demonstrates a knowledge of the elements and style in a wide variety of writing and uses knowledge to evaluate critically in a variety of contexts • Uses an extensive range of formal texts and identifies and evaluates content for a variety of complex purposes • Reads independently from a wide range of materials, independently choosing reading material for a specific purpose • Reads a text of many paragraphs • Text contains challenging and complex subject matter with personal and/or general relevance • Text has levels of meaning and interpretation and a number of unfamiliar words
Comprehension	• Identifies the main idea and explains how the details support the main idea • Identifies important elements of fiction (setting, characters, plot and theme) • Follows complex written instructions
Interpretation	• Questions and evaluates ideas (e.g., when summarizing the main ideas) • Uses structural and visual elements of the text to make reasoned judgements • Makes more complex inferences • Recognizes social and cultural influence and bias in writing • Compares and evaluates the organization and detail of different texts that represent the same topic or story • Clarifies and broadens own point of view by examining the ideas of others; expresses a personal opinion based on increased understanding

Read with Understanding for Various Purposes

Reading Strategies *Levels 1–5*

Level	Performance Indicators
Level One	• Uses knowledge of alphabet and basic phonics to decode common words • Uses knowledge of basic grammar, predictable word patterns, and basic sentence structure in speech to understand phrases and sentences • Uses knowledge of basic spelling conventions and simple punctuation • Uses context cues and personal experience to gather meaning from the text • Scans simple text for familiar words • Uses pictures and illustrations to determine meaning of unfamiliar words and gather information about the text
Level Two	• Uses phonics and knowledge of word parts to decode more easily • Uses knowledge of basic grammar, predictable word patterns, and sentence structure in writing to understand phrases and sentences • Uses knowledge of basic spelling conventions and simple punctuation • Uses context cues and personal experience to gather meaning from the text • Scans to find simple information • Uses pictures and illustrations to gather information about the text
Level Three	• Uses a variety of strategies (patterns of word structure, root words, prefixes and suffixes) to decode and determine the meaning of unfamiliar words • Uses knowledge of more detailed elements of grammar, language structures, spelling and punctuation to understand phrases and sentences • Draws on personal experience and on reading experience to gather meaning from the text • Adjusts reading speed • Skims to understand type of text; scans to find specific information • Begins to take notes
Level Four	• Uses a variety of more complex strategies (word origins and derivations) to decode and determine the meaning of new vocabulary independently • Uses knowledge of elements of more complex grammar, language structures, spelling, punctuation, and some stylistic devices to understand phrases and sentences • Draws more deeply on personal experiences and on a wider variety of reading experiences to gather meaning from the text • Skims to get an overview of the content; scans to find specific information • Organizes and records key points in order
Level Five	• Uses a wide variety of complex strategies (knowledge of word origins and derivations and word analysis techniques) to decode and determine the meaning of unfamiliar words independently • Uses knowledge of elements of complex grammar, language structures, spelling, punctuation, and numerous stylistic devices (e.g., symbolic language) to understand phrases and sentences • Draws more deeply on personal experiences and on a much wider variety of reading experiences to gather meaning from text • Selects appropriate reading strategies (skimming, scanning) • Organizes and records key points in order

Read with Understanding for Various Purposes

Forms and Conventions   *Levels 1–5*

Level	Performance Indicators
Level One	• Demonstrates basic awareness of familiar forms of writing by identifying how different kinds of materials are organized (e.g., simple schedules, charts, menus, personal letters, job ads) • Uses alphabetical order and basic conventions of formal texts (e.g., book titles) to locate information • Reads text of one paragraph (or a few short paragraphs) or a list of sentences • Text is familiar with everyday content with personal relevance • Text has simple, concrete information in simple, familiar wording
Level Two	• Demonstrates knowledge of more forms of writing (fiction vs. non-fiction) and uses that knowledge as a guide in reading (though not always able to read all of the located information) • Uses various conventions of formal texts (e.g. simple charts and maps, dictionaries) to locate and interpret information • Reads text: one page of short paragraphs • Text is familiar, with everyday content and personal and/or general relevance • Text has concrete information in familiar, concrete wording; some simple inferential meaning
Level Three	• Demonstrates a wider knowledge of various forms of writing such as articles, editorials, or short essays from resources including newspapers, magazines, books, the Internet, and computer CDs • Uses various conventions of formal texts to locate and interpret information (headings, index, parts of a letter, reference materials) • Begins to select appropriate materials for different purposes • Reads text of a number of paragraphs; gathers information from graphs and tables • Text is within the interest of the reader with personal and/or general relevance • Text has a combination of concrete and inferential meaning, some of it complex, some unfamiliar vocabulary
Level Four	• Demonstrates a knowledge of elements and style in a variety of forms of writing • Uses a variety of conventions of formal texts (index, appendices, graphs, tables, footnotes and more complex reference resources) to locate and interpret information for a variety of purposes (simple research) • Reads independently from a variety of materials but may require help choosing reading material for a specific purpose • Reads a text of many paragraphs • Text contains complex subject matter with personal and/or general relevance • Text has levels of meaning and interpretation and a number of unfamiliar words
Level Five	• Demonstrates a knowledge of the elements and style in a wide variety of writing and uses knowledge to evaluate critically in a variety of contexts • Uses an extensive range of formal texts and identifies and evaluates content for a variety of complex purposes • Reads independently from a wide range of materials, independently choosing reading material for a specific purpose • Reads a text of many paragraphs • Text contains challenging and complex subject matter with personal and/or general relevance • Text has levels of meaning and interpretation and a number of unfamiliar words

Read with Understanding for Various Purposes

Comprehension *Levels 1–5*

Level	Performance Indicators
Level One	• Retells a simple story or event in order • Reads symbols and common sight words from everyday life • Follows simple pictorial instructions
Level Two	• Identifies the topic and purpose of a piece of writing • Identifies the main idea and supporting details • Follows simple written instructions
Level Three	• Identifies the topic and purpose of a piece of writing • Identifies the main idea and supporting details • Follows written instructions
Level Four	• Identifies the main idea and purpose in writing • Cites details that support the main idea • Follows increasingly complex written instructions
Level Five	• Identifies the main idea and explains how the details support the main idea • Identifies important elements of fiction (setting, characters, plot and theme) • Follows complex instructions

Read with Understanding for Various Purposes

Interpretation   *Levels 1–5*

Level	Performance Indicators
Level One	• Expresses thoughts and feelings about stories and events • Predicts what may happen in a story; revises or confirms predictions
Level Two	• Begins to consider ideas from reading in development of own opinions • Distinguishes between fact and opinion in text • Begins to make simple inferences • Expresses thoughts and feelings about ideas in a piece of writing
Level Three	• Makes judgements (predictions, conclusions) using evidence from the text • Makes inferences • Begins to identify a writer's point of view • Considers ideas form reading in the development of own opinions • Recognizes how one's own attitude may influence interpretation
Level Four	• Continues to make judgements based on evidence • Makes more complex inferences • Identifies a writer's perspective; distinguishes between logical and illogical arguments, objectivity and prejudice • Develops and clarifies own points of view by examining the ideas of others
Level Five	• Questions and evaluates ideas (e.g., when summarizing the main ideas) • Uses structural and visual elements of the text to make reasoned judgements • Makes more complex inferences • Recognizes social and cultural influence and bias in writing • Compares and evaluates the organization and detail of different texts that represent the same topic or story • Clarifies and broadens own point of view by examining the ideas of others; expresses a personal opinion based on increased understanding

Write Clearly to Express Ideas: **Introduction**

General Overview

The level descriptions for *Write Clearly to Express Ideas* identify the knowledge and skills demonstrated at each of the five LBS levels of writing. The level descriptions are based on the skills detailed in the matrix of *Working with Learning Outcomes (1998)*.

For each level, the level descriptions for *Write Clearly to Express Ideas* contain **summary statements** describing overall levels of achievement in writing, **features** that identify the important aspects of writing skill, and **performance indicators** that present a guide for a more detailed assessment of writing skills.

How the Level Descriptions for *Write Clearly to Express Ideas* Can Be Used

Literacy practitioners are encouraged to use the level descriptions for *Write Clearly to Express Ideas* as well as the matrix of *Working with Learning Outcomes (1998)* in their work, making decisions based on the needs of each learner and the context of each situation.

The matrix in *Working with Learning Outcomes (1998)* is best used when a high degree of detail is desired. The level descriptions are most useful when a synthesized description of performance of skill is required. The features of the level descriptions present an integrated skills listing and the summary statements present the most integrated description of writing skills.

The level descriptions may be useful when initially assessing the writing skills of a learner, when developing a training plan, when creating learning activities, or when assessing a learner's progress toward his or her goal through demonstration activities involving writing. As with the other outcomes in The Level Descriptions Manual, practitioners should choose only those features and performance indicators for writing that are relevant to a learner and his/her goal.

The Development of Summary Statements

The summary statements provide the broadest descriptions of learner performance at each level. Each summary statement combines all four features of writing to further synthesize and summarize the characteristics of writing at each level of skill, integrating the features of **purpose and**

form, organization, style, and **mechanics** to provide a holistic view of each level of writing.

This holistic approach adds a new dimension to assessment, which can be used as a complement to the matrix of *Working with Learning Outcomes (1998)*.

The Development of Features

The level descriptions for *Write Clearly to Express Ideas* describe the features, or primary traits, of writing. The four features of writing: **purpose and form, organization, style,** and **mechanics** identify the elements which are needed for clear and effective writing and are based on the skill sets of the matrix of *Working with Learning Outcomes (1998)*. The features have been developed based on a meaningful reworking of the skill sets, involving both a synthesis in some areas and an expansion of features in others.

The table below compares the skill sets for writing in the matrix of *Working with Learning Outcomes (1998)* to the features for writing in The Level Descriptions Manual.

Outcome: *Write Clearly to Express Ideas*	
Working with Learning Outcomes (1998)	The Level Descriptions Manual
Skill Sets	**Features**
Write for various purposes	Purpose and Form
Visual presentation	Organization
Grammar	Mechanics
Punctuation	Mechanics
Spelling	
Vocabulary building in writing, reading, and spelling	Style

The six skill sets for writing in the matrix of *Working with Learning Outcomes (1998)* have been synthesized into four features for writing in The Level Descriptions Manual. For example, in the matrix of *Working with Learning Outcomes (1998)*, three skill sets focus on aspects of mechanics in writing, seeming to over-represent this area. In the level descriptions, each of these three skill sets is represented in one feature: mechanics. As well, the features have been expanded to include items that were not addressed in *Working with Learning Outcomes (1998)*, such as *voice* and *sentence variety*, which are included under the feature, *style*.

The features provide an integration of skills for writing not found in the matrix of *Working with Learning Outcomes (1998)*, which should aid practitioners in the assessment of skills in integrated-skill demonstrations.

The Development of Performance Indicators

The performance indicators have been developed based on a reworking of the success and transition markers of the matrix of *Working with Learning Outcomes (1998)*. This reworking involved in various places synthesizing or elaborating skills to create useful performance indicators that are clear and consistent across levels and that reflect adult learning.

• Summary Statements •

Level One

The writer writes for some specific, personally relevant purposes, using a few simple forms and sentences, a familiar vocabulary, and some basic grammar, punctuation, and spelling.

Level Two

The writer writes for a variety of specific, familiar purposes and audiences, using various simple forms and a basic paragraph structure, with simple support to convey a main idea. The writer uses words and phrases appropriate for the purpose and audience, and basic grammar, punctuation, and spelling.

Level Three

The writer writes for a variety of specific purposes and audiences, using various forms of some complexity and developed paragraphs to convey a main idea. The writer begins to use an appropriate style for the purpose and audience and common grammar, punctuation, and spelling.

Level Four

The writer writes for a variety of different purposes and audiences, using complex forms, and well-linked and well-developed paragraphs, with effective supporting details to convey a main idea. The writer uses a style appropriate for the purpose and audience, as well as more complex grammar, punctuation, and spelling.

Level Five

The writer writes for a wide variety of different purposes and audiences, using a wide variety of complex forms and organizational approaches with appropriate and precise supporting details to convey a main idea creatively and logically. The writer uses a style that reinforces the purpose and engages the audience, as well as complex grammar, punctuation, and spelling.

Write Clearly to Express Ideas   Level 1

Summary Statement

The writer writes for some specific, personally relevant purposes, using a few simple forms and sentences, a familiar vocabulary, and some basic grammar, punctuation, and spelling.

Description of Level One by Feature

Features	Performance Indicators

Purpose and Form	• **Begins to write for specific purposes using a few different forms:**
	
	  - Gives personal information (writes own name, names of family members, and address, fills out a simple form)
	
	  - Writes a short list using familiar words
	
	  - Writes simple notes and short, simple personal letters
	
	  - Describes experiences
	
	  - Copies from printed materials

Organization	• Writes simple sentences to express thoughts (though not always able to express thoughts clearly or write sentences correctly)
Style (Voice, Vocabulary, and Sentence Variety)	• Writes for a familiar audience • Uses words from oral vocabulary • Begins to use less familiar words • Writes simple sentences leaving spaces between words
Mechanics (Grammar, Punctuation, and Spelling)	• Uses capital letters for beginning of sentences, for familiar proper nouns such as names and for the pronoun I • Writes word endings ("ed" "ing" "s") from knowledge of spoken English • Uses basic punctuation (period at end of a statement) • Uses basic phonics to spell unfamiliar words

Summary Statement

The writer writes for a variety of specific, familiar purposes and audiences, using various simple forms and a basic paragraph structure, with simple support to convey a main idea. The writer uses words and phrases appropriate for the purpose and audience, and basic grammar, punctuation, and spelling.

Description of Level Two by Feature

Features	Performance Indicators
Purpose and Form	• **Writes for specific purposes using various forms of writing:** - Completes forms requiring more detailed personal information - Writes lists, simple letters, simple paragraphs and short simple stories - Answers simple comprehension questions - Describes experiences - Writes simple instructions
Organization	• Organizes thoughts to convey a main idea in a paragraph • Uses basic organizers such as common linking words, titles, basic parts of a letter, and parts of a paragraph (introductory and concluding sentences and simple support) • Uses basic revising techniques
Style (Voice, Vocabulary, and Sentence Variety)	• Begins to show some awareness of different audiences • Introduces words from reading into writing • Chooses words and phrases most appropriate to their purpose • Uses various sentence types (questions and commands) • May use simple visual material to explain or support message
Mechanics (Grammar, Punctuation, and Spelling)	• Uses capital letters for proper nouns • Uses the apostrophe in common contractions • Uses commas in lists, dates, and addresses • Uses common abbreviations • Checks spelling by using word knowledge; begins to use resources: a dictionary or computer

Write Clearly to Express Ideas

Level 3

Summary Statement

The writer writes for a variety of specific purposes and audiences, using various forms of some complexity and developed paragraphs to convey a main idea. The writer begins to use an appropriate style for the purpose and audience and common grammar, punctuation, and spelling.

Description of Level Three by Feature

Features	Performance Indicators

Purpose and Form	• **Writes for specific purposes using a variety of forms of writing:**
	
	  - Completes more complex forms requiring non-personal information
	
	  - Writes letters (personal and business) and memos
	
	  - Writes short summaries, short reports, and short compositions/essays to present factual information, opinions, and experiences
	
	  - Presents opinions based on reading

Organization	• Organizes information and ideas to convey one main idea in developed paragraphs • Uses introductory and concluding paragraphs, appropriate connecting words and relevant supporting details • Revises using feedback
Style (Voice, Vocabulary, and Sentence Variety)	• Shows awareness of audience needs • Uses appropriate levels of language (formal/informal) • Selects words to create effect; uses thesaurus and a dictionary to find synonyms • Uses a variety of sentence structures (simple and compound sentences with phrasing to add details) • May use basic word processing applications (e.g., fonts, graphics)
Mechanics (Grammar, Punctuation, and Spelling)	• Uses noun/pronoun agreement, consistent pronoun and consistent verb tense • Uses standard subject-verb agreement • Uses phrases to clarify meaning • Uses apostrophes for possession • Punctuates simple and compound sentences with periods and commas • Checks spelling by using word knowledge and resources: a dictionary and computer

Summary Statement

The writer writes for a variety of different purposes and audiences, using complex forms, and well-linked and well-developed paragraphs, with effective supporting details to convey a main idea. The writer uses a style appropriate for the purpose and audience, as well as more complex grammar, punctuation, and spelling.

Description of Level Four by Feature

Features	Performance Indicators
Purpose and Form	• **Writes for a variety of purposes using a variety of more complex forms of writing:** - Writes business letters, news articles, book and article reviews, longer essays - Takes notes from a text - Writes to narrate, report, persuade, argue, inform, explain, summarize, compare, establish a cause-and-effect relationship, clarify personal concerns, explore social issues, evaluate information and state a position
Organization	• Organizes information and ideas to convey one main idea in well-linked and well-developed paragraphs • Selects supporting ideas for effect; may use opinions/quotes and statistics • Revises independently, seeking feedback when needed
Style (Voice, Vocabulary, and Sentence Variety)	• Uses voice appropriate to purpose • Shows awareness of the expressiveness of words in word choice and selects words and expressions to create special effects; uses special terminology where necessary • Uses a wide variety of sentence types and structures (complex sentences) appropriately and effectively • May use word processing applications (e.g., fonts, graphics) to enhance writing
Mechanics (Grammar, Punctuation, and Spelling)	• Uses a variety of subordinate clauses and modifiers • Uses periods consistently after initials and abbreviations • Uses quotation marks with commas and periods for direct speech • Uses commas in complex sentences • Spells a wide range of common words • Confirms spelling of difficult, unfamiliar words by using word knowledge and a variety of resources

Write Clearly to Express Ideas

Summary Statement

The writer writes for a wide variety of different purposes and audiences, using a wide variety of complex forms and organizational approaches with appropriate and precise supporting details to convey a main idea creatively and logically. The writer uses a style that reinforces the purpose and engages the audience, as well as complex grammar, punctuation, and spelling.

Description of Level Five by Feature

Features	Performance Indicators
Purpose and Form	• **Writes for a variety of purposes using a wide variety of complex forms of writing:** - Writes business letters, news articles, book and article reviews, longer essays, technical instructions - Takes notes from a text - Writes to narrate, report, persuade, argue, inform, explain, summarize, compare, establish a cause-and-effect relationship, clarify personal concerns, explore social issues, evaluate information, and analyze data to solve problems or state a position
Organization	• Organizes information and ideas to convey one main idea in well-linked and well-developed paragraphs creatively and logically by using a variety of approaches • Selects essential supporting details skillfully for effect • Includes documented source materials and media materials such as graphs and charts where appropriate • Revises independently
Style (Voice, Vocabulary, and Sentence Variety)	• Uses voice to reinforce purpose and connect with the audience • Uses vocabulary with increasing sophistication and effectiveness • Uses special terminology in a particular area of study (if necessary) • Uses a wide variety of sentence types and structures with conscious attention to style • Uses more word processing applications (graphics, tables, charts) to enhance writing
Mechanics (Grammar, Punctuation, and Spelling)	• Uses standard case for pronouns • Uses more complex punctuation (colons and parentheses) • Uses quotation marks to distinguish words being discussed • Confirms spelling of difficult, unfamiliar words by using word knowledge and a variety of resources • Uses generalizations and knowledge about how words are formed to spell technical and unfamiliar terms

Write Clearly to Express Ideas

Purpose and Form   *Levels 1–5*

Level	Performance Indicators
Level One	**Begins to write for specific purposes using a few different forms:** • Gives personal information (writes own name, names of family members, and address, fills out a simple form) • Writes a short list using familiar words • Writes simple notes and short, simple personal letters • Describes experiences • Copies from printed materials
Level Two	**Writes for specific purposes using various forms of writing:** • Completes forms requiring more detailed personal information • Writes lists, simple letters, simple paragraphs and short simple stories • Answers simple comprehension questions • Describes experiences • Writes simple instructions
Level Three	**Writes for specific purposes using a variety of forms of writing:** • Completes more complex forms requiring non-personal information • Writes letters (personal and business) and memos • Writes short summaries, short reports, and short compositions/essays to present factual information, opinions, and experiences • Presents opinions based on reading
Level Four	**Writes for a variety of purposes using a variety of more complex forms of writing:** • Writes business letters, news articles, book and article reviews, longer essays • Takes notes from a text • Writes to narrate, report, persuade, argue, inform, explain, summarize, compare, establish a cause-and-effect relationship, clarify personal concerns, explore social issues, evaluate information and state a position
Level Five	**Writes for a variety of purposes using a wide variety of complex forms of writing:** • Writes business letters, news articles, book and article reviews, longer essays, technical instructions • Takes notes from a text • Writes to narrate, report, persuade, argue, inform, explain, summarize, compare, establish a cause-and-effect relationship, clarify personal concerns, explore social issues, evaluate information, and analyze data to solve problems or state a position

Write Clearly to Express Ideas

Style *Levels 1–5*

Level	Performance Indicators
Level One	• Writes for a familiar audience • Uses words from oral vocabulary • Begins to use less familiar words • Writes simple sentences leaving spaces between words
Level Two	• Begins to show some awareness of different audiences • Introduces words from reading into writing • Chooses words and phrases most appropriate to their purpose • Uses various sentence types (questions and commands) • May use simple visual material to explain or support message
Level Three	• Shows awareness of audience needs • Uses appropriate levels of language (formal/informal) • Selects words to create effect; uses thesaurus and a dictionary to find synonyms • Uses a variety of sentence structures (simple and compound sentences with phrasing to add details) • May use basic word processing applications (e.g., fonts, graphics)
Level Four	• Uses voice appropriate to purpose • Shows awareness of the expressiveness of words in word choice and selects words and expressions to create special effects; uses special terminology where necessary • Uses a wide variety of sentence types and structures (complex sentences) appropriately and effectively • May use word processing applications (e.g., fonts, graphics) to enhance writing
Level Five	• Uses voice to reinforce purpose and connect with the audience • Uses vocabulary with increasing sophistication and effectiveness • Uses special terminology in a particular area of study (if necessary) • Uses a wide variety of sentence types and structures with conscious attention to style • Uses more word processing applications (graphics, tables, charts) to enhance writing

Write Clearly to Express Ideas

Organization *Levels 1–5*

Level	Performance Indicators
Level One	• Writes simple sentences to express thoughts (though not always able to express thoughts clearly or write sentences correctly)
Level Two	• Organizes thoughts to convey a main idea in a paragraph • Uses basic organizers such as common linking words, titles, basic parts of a letter, and parts of a paragraph (introductory and concluding sentences and simple support) • Uses basic revising techniques
Level Three	• Organizes information and ideas to convey one main idea in developed paragraphs • Uses introductory and concluding paragraphs, appropriate connecting words and relevant supporting details • Revises using feedback
Level Four	• Organizes information and ideas to convey one main idea in well-linked and well-developed paragraphs • Selects supporting ideas for effect; may use opinions/quotes and statistics • Revises independently, seeking feedback when needed
Level Five	• Organizes information and ideas to convey one main idea in well-linked and well-developed paragraphs creatively and logically by using a variety of approaches • Selects essential supporting details skillfully for effect • Includes documented source materials and media materials such as graphs and charts where appropriate • Revises independently

Write Clearly to Express Ideas

Level	Performance Indicators
Level One	• Uses capital letters for beginning of sentences, for familiar proper nouns such as names and for the pronoun I • Writes word endings ("ed" "ing" "s") from knowledge of spoken English • Uses basic punctuation (period at end of a statement) • Uses basic phonics to spell unfamiliar words
Level Two	• Uses capital letters for proper nouns • Uses the apostrophe in common contractions • Uses commas in lists, dates, and addresses • Uses common abbreviations • Checks spelling by using word knowledge; begins to use resources: a dictionary or computer
Level Three	• Uses noun/pronoun agreement, consistent pronoun and consistent verb tense • Uses standard subject-verb agreement • Uses phrases to clarify meaning • Uses apostrophes for possession • Punctuates simple and compound sentences with periods and commas • Checks spelling by using word knowledge and resources: a dictionary and computer
Level Four	• Uses a variety of subordinate clauses and modifiers • Uses periods consistently after initials and abbreviations • Uses quotation marks with commas and periods for direct speech • Uses commas in complex sentences • Spells a wide range of common words • Confirms spelling of difficult, unfamiliar words by using word knowledge and a variety of resources
Level Five	• Uses standard case for pronouns • Uses more complex punctuation (colons and parentheses) • Uses quotation marks to distinguish words being discussed • Confirms spelling of difficult, unfamiliar words by using word knowledge and a variety of resources • Uses generalizations and knowledge about how words are formed to spell technical and unfamiliar terms

Introduction to a New Area of Assessment: Oral Communication

All adult learners come to literacy programs with a variety of oral communication skills and strategies as they have been speaking and listening all of their lives. The focus of the *Speak and Listen Effectively* level descriptions is to help learners expand their capabilities of presenting ideas to others, interacting in oral communication with others, and listening to others using effective skills, strategies, and competencies.

Although the assessment and practice of oral communication skills in LBS-funded agencies often take a secondary role in favor of more "visual" aspects of literacy, such as reading, writing, and numeracy, communicating with others orally is an integral part of our everyday lives.

While quite comfortable communicating with family and friends in familiar contexts, most people can think of situations where their ability to communicate orally is challenged. For example, many people may be uncomfortable talking in community or public forums. Most people get nervous being interviewed for a job and find it difficult to negotiate with someone in an authoritative position, such as working out a conflict with a supervisor. In these kinds of situations, oral communication is shaped by power relations and systemic factors such as race, gender, and class (see Campbell, 1999). Relations of power and social relations shape interactions and the success that people have in "being heard." But there are also skills and strategies in oral communication that can be learned and applied to increase everyone's chances of "being heard."

General Overview

The goal of the *Speak and Listen Effectively* level descriptions is to provide clear performance indicators organized in logical and meaningful features of oral communication. This should help practitioners and learners determine what skills and strategies learners will need to develop so that they can negotiate a variety of situations and contexts with greater comfort and skill in oral communication.

These level descriptions are meant to help organize the way practitioners think about assessing and working on oral communication skills. We rarely just speak or just listen and we rarely speak or listen without interacting with another person. Most of time, speaking, listening, and interacting

are all occurring at once. The three parts are inter-related and create the whole of oral communication.

The *Speak and Listen Effectively* level descriptions are based on the skills listed in the matrix in *Working with Learning Outcomes (1998)* and are intended as a complement to that document. While *Working with Learning Outcomes (1998)* provides a very detailed list of skills, the level descriptions for speaking and listening provide a way to describe programming and assessment results in oral communication more holistically, with a focus on important **features** and **performance indicators** integral to good oral communication skills. These features should prove useful to practitioners when designing learning activities and developing demonstrations and meaningful to learners in understanding assessment of skills.

How The Level Descriptions for *Speak and Listen Effectively* Can Be Used

It is important to acknowledge that the level descriptions for *Speak and Listen Effectively* do not correspond to the level descriptions for reading, writing, or numeracy. That is, a learner who writes well may not present information well orally; likewise, a learner may have strong oral communication skills but more basic literacy and numeracy skills. The level descriptions represent a continuum of oral communication skills from levels 1 – 5 but are not meant to be used to "label" learners. They will be most useful when used to develop practical and meaningful oral communication skills learning activities and demonstrations of skills learned in a literacy program.

When a demonstration activity is planned to assess oral communication skills, the assessor and the learner need to be clear on which feature or features of **presenting**, **interacting**, and/or **listening** are being assessed. We all have different degrees of ability in speaking, listening, and interacting orally. A learner may have much stronger interacting skills than presenting skills. The performance indicators and the corresponding examples of situations should help a practitioner to plan relevant skill-building activities and to see where oral communication is integrated into demonstration activities involving skills in reading, writing, and numeracy.

The Development of Summary Statements

The team of practitioners and consultants who worked on the *Speak and Listen Effectively* level descriptions attempted to create summary statements of overall competence for oral communication at each level. These summary statements were revised many times and were sent to readers across the province in a variety of LBS-funded agencies. It was decided after much reflection following the field-testing, that summary statements for oral competence would not be included in this manual.

Accurately reflecting five general skill levels of oral competence across all contexts for people who have been speaking English all of their lives was found to be not only difficult, but not very useful. The team decided that focusing on features and performance indicators rather than focusing on summary statements of oral communication levels would be more useful to practitioners and learners.

The Development of Features

After careful reflection on the skill sets for *Speak and Listen Effectively* in *Working with Learning Outcomes (1998)*, the Speak and Listen team decided that while each of these four aspects of communication is certainly important, the organization of four skills sets in this way represents them as four equal and parallel categories of oral communication when in fact they are not. Two of the skill sets in the matrix of *Working with Learning Outcomes (1998)* refer to the contexts or situations where oral communication takes place: "Communicating in a Group" and "Communicating Interpersonally". The other two skill sets in the matrix refer to elements of oral communication that take place across all contexts and situations: "Use of Words" and "Non-Verbal Communication Skills".

In an effort to organize, simplify, and clarify the representation of skills in the skills sets for the purposes of assessment and use in the LBS Program, the four skill sets were reconfigured into three **features** to reflect the main elements of oral communication: **speaking**, **interacting**, and **listening**. This change was based on research on oral communication assessment tools and approaches used in Canada and abroad.

Although each of the new features emphasizes a particular grouping of skills, the skills are highly interrelated and complementary. Viewing the features as interrelated, therefore, ensures a holistic approach to assessment that reflects the interactive nature of oral communication. In

real-life situations, skills from all three features are combined in complex ways. For example, in a small group discussion, a learner will use skills to organize and present information, listen to and interpret ideas put forth by others, and apply specific interaction strategies such as encouraging responses from others.

The presentation of the three features also permits the possibility of a more focused assessment. For example, in some situations, one feature may be more prominent: while listening to the news on the radio, listening skills are mainly used. In others, skills across all three features may be employed, but the practitioner may wish to focus on one aspect of oral communication for the purposes of assessment and subsequent activities planning (e.g., the practitioner may identify that a learner is very effective when presenting his ideas in a group but is not as good at listening to the ideas of others).

The features reflect all aspects of the *Speak and Listen Effectively* outcome of the matrix with greater consistency and clarity. The **listening** feature was created to attribute more weight to listening and interpreting skills, which are somewhat underrepresented in the matrix of *Working with Learning Outcomes (1998)*. The team's research and experience working in literacy programs confirmed that listening should be well represented.

The resulting features of the level descriptions are compared to the skill sets of the matrix in the table below. The features of *Speak and Listen Effectively* are explained in more detail on page 43.

Outcome: *Speak and Listen Effectively*	
Working with Learning Outcomes (1998)	The Level Descriptions Manual
Skill Sets	**Features**
Use of Words	Presenting
Communicating Interpersonally	Interacting
Communicating in a Group	
Non-Verbal Communication Skills	
	Listening

The Features of Speak and Listen Effectively

Feature	Explanation
Presenting	This feature is about speaking. The focus is on the vocabulary used in speech and the ability to conceptualize, order, and present ideas and information in different situations. It draws directly from the skill set "Use of Words" in the matrix of *Working With Learning Outcomes (1998)*. The success and transition markers from "Use of Words" were used to develop the performance indicators. The matrix skill set "Use of Words" included a focus on the grammatical structures of speech. The team chose to downplay the focus on grammatical structure, since, rather than reflecting language development as it may in children, in adults, the use of certain grammatical forms may reflect regional or other group differences and may or may not impede oral communication. As well, for the purposes of assessment, it is difficult, and perhaps not very useful, for the practitioner to focus on particular discrete items of speech, such as "the use of linking words." Rather, the focus should be on assessing the broader skills needed to speak and express ideas more effectively in formal and informal situations. Vocabulary is very integral to this as learners expand their repertoire of vocabulary to suit formal and informal situations.
Interacting (one-on-one and in groups)	This feature is about interacting with others in one-on-one and group situations. The focus is on initiating and sustaining conversations, building skills to deal with misunderstandings and conflict, creating conditions for successful communication, and becoming aware of non-verbal communication cues. This feature draws directly from the skills sets "Communicating Interpersonally," "Communicating with Others," and "Non-Verbal Communication Skills." The success and transition markers from the matrix were elaborated on and made consistent across all five levels. Many of the success and transition markers from "Communicating Interpersonally" and "Communicating in a Group" were adapted and placed in the **interacting** feature because this feature emphasizes the strategies that are used in communicating in both interpersonal and group situations to clarify, facilitate, and encourage understanding. The performance indicators also emphasize strategies to build agreement as well as to deal with misunderstanding due to cultural, social, and linguistic differences. The success and transition markers from "Non-Verbal Communication Skills" were adapted and placed in the **interacting** feature. Non-verbal communication reflects a major element of communication but is so integrated into all aspects of communication and tightly linked to other factors (cultural factors, individual factors) that these markers are difficult to assess and appear to be over-represented in the matrix. The markers from the "Non-Verbal" skill set have been synthesized into one performance indicator for each level of **interacting.**
Listening	This feature is about listening. The focus is on building listening skills to better retain, order, and interpret spoken texts, and to develop strategies to check and ensure what is being heard. The performance indicators have been developed from the success and transition markers that emphasize listening in the matrix of *Working with Learning Outcomes (1998)*, although there are very few. The performance indicators were developed with reference to the team's research on LBS oral communication assessment tools and were extremely well-received in field testing.

The Development of Performance Indicators

The performance indicators are based on the success and transition markers of the matrix in *Working with Learning Outcomes (1998)*. These markers were carefully synthesized, reconfigured and elaborated on for consistency and clarity and categorized under the appropriate feature.

In many cases, the detailed success and transition markers in the matrix suggested an important element of communication that needed to be generalized into a skill or strategy and represented across all levels. In some cases, the markers did not follow clearly from one level to another, presenting gaps and inconsistencies. The performance indicators were developed with the goals of ensuring that they were clearly worded and consistent and that they reflected an increasing complexity across all five levels.

The Development of Examples

The "Examples" column contains possible situations or tasks involving oral communication. This column was developed to highlight the fact that all social interactions take place in a particular social context or situation. The examples are meant to help contextualize the features and performance indicators at each of the five levels. They do not, in themselves, reflect a skill level. Adult learners at various levels may find themselves in many of the situations that are described from levels 1–5, but the ability to be skilled and comfortable in different situations varies according to an individual's oral communication skills and strategies. In other words, the complexity of the example situations can be seen by linking the situation to the level of difficulty reflected in the corresponding performance indicators for that level. The examples of oral communication situations and tasks should assist the pracitioner with understanding the skills and strategies of oral communication described in the performance indicators.

The examples in levels one and two reflect more "familiar" and straightforward instances of oral communication where basic skills can be practised in preparation to transfer them to more complex and unfamiliar situations. Levels 3–5 reflect more complex interactions where the skills and strategies at these levels can be demonstrated.

Speak and Listen Effectively   Level 1

Description of Level One by Feature

Features	Performance Indicators	Examples
Presenting	• Uses familiar vocabulary and common expressions • Presents ideas and information in a sensible order	• Gives a simple explanation of how to do or make something (2 or 3 steps) • Answers questions requiring basic information • Relates a short personal story
Interacting (one-on-one and in groups)	• Listens to and contributes to discussions on familiar topics expressing own ideas and opinions and responding to questions and comments • Uses basic interaction strategies such as opening and closing conversations, asking questions • Recognizes miscommunications in both formal and informal situations and responds appropriately ("Speak up please," "Can you repeat that?") • Observes how some non-verbal communication cues (body language, volume and tone of voice) affect communication (e.g., comments on own responses to different tones of voice)	• Converses with a person or small group about the weather • Communicates to get service (orders food, buys a bus ticket) • Asks for help (e.g., How much does this cost? Where is the…?) • Introduces self to another person in the classroom and initiates conversation
Listening	• Gets the main idea of a simple story or event • Reflects on what is heard • Retells simple information • Uses basic strategies to check understanding (asks questions, asks for repetition)	• Follows one or two single-step oral instructions to complete a practical task (teacher's instructions) • Retells a story told by someone else (family member, friend or another student) • Repeats key information in short announcements (school, sports, store) • Relays simple recorded phone messages to a friend or relative • Discusses the content of taped stories • Discusses the meaning of simple song lyrics • Expresses thoughts and feelings about stories or events on TV

Description of Level Two by Feature

Features	Performance Indicators	Examples
Presenting	• Uses a wider range of familiar vocabulary to organize, link, and clarify ideas when speaking • Presents ideas clearly and in a coherent order and provides more detailed information	• Gives simple directions to perform a task or a job (tells how to use a household appliance or tool) • Talks about a TV show or a movie • Relates a story in the news • Uses the telephone to give and receive information to unfamiliar people/in unfamiliar situations (calls to make or cancel an appointment)
Interacting (one-on-one and in groups)	• Listens to others and contributes ideas appropriate to the topic of discussion; expresses ideas and opinions, and provides feedback to others in discussions about familiar topics • Uses interaction strategies such as opening and closing conversations, asking questions, and allowing others to speak and waiting for his/her turn (turn-taking) • Works to repair misunderstandings in communication (for example, asks for repetition or clarification: "Did you say…?", "Do you mean . . . ?") • Uses developing awareness of how non-verbal communication cues (body language, volume and tone of voice) affect communication (comments on cues from others; tries to use a tone that suits the situation).	• Asks and retells directions • Plans a holiday with family or friends • Participates in group discussions on a popular topic (sports, exercise, child-rearing) • Plans end-of-program social event or field trip with class members • Discusses a taped or read story • Participates in focus group to evaluate the program
Listening	• Gets the main idea of a story or an event and reflects on relevant information • Retells information containing greater detail • Uses basic strategies to check and increase understanding (asks for clarification)	• Calls for automated information (bus schedule, movie listings, pool hours, road conditions) • Follows simple oral instructions to complete an activity, (fitness workout instructions) • Understands the key points of critical radio announcements (school closures, traffic) • Describes highlights of short informal speeches (wedding reception) • Takes notes – records two or three key points from taped announcements, information from radio commercials • Takes messages at home or work

Description of Level Three by Feature

Features	Performance Indicators	Examples
Presenting	• Uses a wider range of vocabulary and selects words to convey intended meaning • Identifies appropriate uses for formal and informal language (knows when to use slang or colloquial language) • Speaks clearly in a focused and organized way when presenting information to others on a variety of topics in familiar and unfamiliar situations • Considers the audience's interests and needs ahead of time when giving a presentation (how big the group is; what to talk about; how long to talk) • Provides specific, detailed information or instructions to familiar and unfamiliar individuals • Makes a case to a familiar person (teacher, friend, family)	• Makes a presentation on a topic of personal interest • Gives more detailed instructions/ directions (gives instructions to the babysitter, explains how to get from one place to another in the community) • Reports the details of an accident • Describes a problem with a car or with E.I. benefits • Negotiates with instructor for extra time to complete assignment
Interacting (one-on-one and in groups)	• Listens to others and stays on topic in conversations on familiar and unfamiliar topics, responding with feedback to the ideas of others • Uses interaction strategies to maintain communication, such as encouraging responses from others, asking questions, and turn-taking • Explores strategies for communicating with others in a variety of situations (how to get the information/response that you need in different situations) • Repairs misunderstandings in communication to keep discussion going ("I'm not sure I understand . . . ", "What I mean is . . . ") • Uses increased awareness of how non-verbal communication cues (body language, volume and tone of voice) affect communication (e.g., identifies cues sent out from self and others as effective or not effective)	• Inquires into two apartments for rent and discusses information gathered with classmates • Negotiates for time off from work or school • Discusses short-term learning goals with instructor/counselor • Converses with assessor/counselor at initial assessment, sharing information about educational/employment background • Discusses and evaluates writing samples of others in a group • Performs a mock interaction with a partner focusing mainly on non-verbal communication cues and discusses effects
Listening	• Gets main idea(s) and lists key points of longer forms of oral communication with some unfamiliar aspects • Draws conclusions about ideas presented in formal situations • Uses strategies to check and increase understanding (takes notes listing unfamiliar vocabulary and key points, replays audio/video tapes, transcribes information from tapes, discusses key points with peers)	• Gets information from sales demonstrations (job fairs, sports shows) • Gets information from a workshop (career planning workshop, computer skills workshop) • Describes the main idea and key points of a presentation or talk given by another learner • Conducts telephone banking • Follows instructions in computer lab • Responds to more sophisticated (touch-tone) voice answering machines

Description of Level Four by Feature

Features	Performance Indicators	Examples
Presenting	• Regularly incorporates a new and varied vocabulary and selects words effectively to convey intended meaning, using comparisons to develop and clarify ideas • Uses formal and informal language appropriately • Uses transitional expressions to signal a new or important point (My point is . . . , Note that . . . , First . . . , Second, etc.) • Rehearses and revises material before making a presentation (reorders ideas, changes the conclusion) • Is aware of the audience while presenting (notices if people are not listening, responds appropriately) • Expresses ideas and opinions confidently, justifying them with details and evidence, facts and examples • Makes a case with a clear rationale to a less familiar person	• Makes a presentation on a less familiar topic • Gives easy-to-follow, multi-step instructions/ directions (e.g., First Aid) • Report on events or problems effectively and in detail (explains a problem to landlady) • Describes and demonstrates a procedure (how to garden, use e-mail) and answers questions • Presents his/her case to an E.I. or W.S.I.B. counselor
Interacting (one-on-one and in groups)	• Listens and contributes to discussion, follows up on the ideas of others, and recognizes different points of view • Uses interaction strategies to facilitate understanding, such as inviting others to contribute, asking questions to clarify a point, and negotiating to find a basis for agreement • Is aware of factors (such as social and cultural differences, different dialects and accents in English, different ideas and opinions) that contribute to the success, or lack of success, of a discussion • Deals with misunderstandings in communication by asking for and using clarification to sustain communication ("Did you say …?" "What I mean is …") • Uses increased awareness of how non-verbal communication cues (body language, volume and tone of voice) affect communication (e.g., uses effective gestures and facial expressions to enhance communication and maintain interest; tries to monitor own non-verbal habits)	• Discusses a current issue in a focus group or class discussion to get different opinions and ideas for solutions • Discusses a concern with a teacher at a parent-teacher meeting • Discusses plans for year-end recognition ceremony as part of student committee • Discusses overall progress and explores career and/or employment options with counselor • Watches video recording of a job interview or T.V. sit-com to discuss different perceptions of verbal and non verbal communication styles
Listening	• Identifies the main idea(s) and supporting details and summarizes content of sustained forms of oral communication containing some implicit information and specialized vocabulary • Evaluates information contained in formal talks and presentations • Uses more complex strategies to check and increase understanding (takes detailed notes from oral presentations, rewrites notes to help organize)	• Follows a series of oral directions to get to a destination • Follows increasingly complex oral instructions (e.g., taking a driver's test) • Summarizes the main idea of radio or T.V. programs • Discusses the usefulness of information in a presentation about technology • Takes accurate, detailed messages at work

Description of Level Five by Feature

Features	Performance Indicators	Examples
Presenting	• Uses an expanded and specialized vocabulary appropriate to the topic and selects words creatively and effectively to convey intended meaning • Uses different levels of formal and informal language effectively • Responds to audience while presenting and adjusts delivery accordingly (changes pace, asks questions, offers to clarify ideas, asks for feedback from audience) • Logically expresses, orders and develops concepts and ideas and justifies these clearly, supplying appropriate evidence • Makes a convincing case with a solid rationale to an unfamiliar person or group	• Makes a formal presentation on a researched topic • Contests a traffic ticket in court • Calls a radio phone-in show to express opinion • Presents opinion at a community event (co-op meeting, community planning meeting, town hall or union meeting)
Interacting (one-on-one and in groups)	• Listens to others and contributes collaboratively in discussions by asking questions and building on the ideas of others • Uses interaction strategies to facilitate understanding, such as asking others for clarification, repeating and rephrasing own ideas, paraphrasing the ideas of others, negotiating with others to reach agreement, and dealing with communication misunderstandings • Works to establish clear purposes and procedures for solving problems, making decisions, and completing projects • Analyses factors (such as social and cultural differences, different dialects and accents in English, different ideas and opinions) that contribute to the success, or lack of success, of a discussion • Works toward building agreement and dealing with conflict that contributes to the success, or lack of success, of a discussion • Uses increased awareness of how non-verbal communication cues (body language, volume and tone of voice) affect communication (e.g., uses effective gestures and facial expressions to clarify meaning in conversations and to add expressiveness when speaking or presenting; evaluates overall effectiveness or lack of effectiveness of non-verbal aspect of presentation or speech given by classmate)	• Raises and tries to resolve a health and safety issue with a union representative • Responds to and solves a complaint • Interviews for a job • Discusses long term career choices with employment counselor • Contributes ideas as a board member of a local literacy organization • Participates as a member of a group producing a school newsletter • Debates a "hot topic" in class
Listening	• Identifies the main idea(s) and supporting information; summarizes content of sustained forms of oral communication containing implicit information and specialized vocabulary • Evaluates overall content and effectiveness of formal speeches and lectures • Uses a wider range of complex strategies to confirm and increase understanding (takes notes to organize and classify, checks interpretation with other listeners, does further research)	• Follows increasingly complex oral instructions such as instructions to operate a piece of equipment • Summarizes the content of radio/TV documentaries and films providing supporting information • Evaluates the effectiveness of a speech by the mayor

Numeracy

Ontario Literacy Coalition

THE LEVEL DESCRIPTIONS MANUAL

General Overview

The level descriptions for each component learning outcome in the numeracy domain identify the knowledge and skills demonstrated at each of the five LBS levels. These level descriptions are based on the skills detailed in the matrix of *Working with Learning Outcomes (1998)*.

For each component learning outcome of numeracy, features and performance indicators have been developed based on the skill sets and transition/success markers of the matrix in *Working with Learning Outcomes (1998)*. The level descriptions numeracy team developed this work with the intention of staying valid to the LBS learning outcomes levels, reflecting the principles of adult learning and the adult learning context, and developing material that is easy to understand, in clear language and practical for practitioners and learners.

Throughout the development of this work, drafts were sent to numeracy practitioners in literacy programs across the province, curriculum experts, and ministry officials for their review and input.

How The Level Descriptions For The Numeracy Outcomes Can Be Used

Numeracy practitioners in LBS-funded agencies are encouraged to use the level descriptions for numeracy as well as the matrix of *Working with Learning Outcomes (1998)* in their work, making decisions based on the learner and the situation.

Working with Learning Outcomes (1998) is best used when a high level of detail is required. The level descriptions are most useful when a synthesized description of performance of skill is required. The features of the level descriptions present an integrated skills listing and the summary statements for each numeracy outcome at each level present the most integrated description of the learner's skills.

The level descriptions may be useful when initially assessing the numeracy skills of a learner, when developing a training plan with a learner, when creating numeracy learning activities, or when assessing a learner's progress toward his or her goal through demonstration activities.

When using the level descriptions for numeracy, practitioners should remember that, as with the other

outcomes in the level descriptions, they should focus on only those outcomes, features, and performance indicators that are relevant to a learner and his/her goal. The applications of the skills are to be relevant to the learner's goals, and to become more complex and applied to a greater variety of situations as the learner advances through the levels. Also, estimation, rounding, and judging the reasonableness of results should run through all tasks at each level.

The Component Learning Outcomes for Numeracy

The LBS learning outcomes for numeracy consist of five component learning outcomes. The level descriptions numeracy team has synthesized all of the skills represented in those five outcomes to result in **four component learning outcomes** for the numeracy level descriptions.

After careful thought and discussion, the level descriptions numeracy team made some changes to the component learning outcomes as follows:

Component Learning Outcomes for The Domain of Numeracy	
Working with Learning Outcomes (1998)	The Level Descriptions Manual
Perform Basic Operations with Numbers	Use Number Sense and Computation
Use Patterning and Algebra	
Use Measurement for Various Purposes	
Solve Geometric Problems	
Manage Data and Probability	

The outcome *Use Number Sense and Computation* was developed to reflect not only the skills identified in *Perform Basic Operations with Numbers* but also to reflect the emphasis on developing number sense as well as a basic skill in computation. The outcome *Use Patterning and Algebra* was integrated into *Use Number Sense and Computation* to reinforce the notion that an understanding of number patterns develops in conjunction with learning about numbers and that algebra is an extension of the study of arithmetic. The development of this new feature should help promote more practical and basic learning of algebra.

The Development of Summary Statements

Summary statements that reflect overall skills for each level have been developed for each component learning outcome of numeracy. These summary statements provide practitioners with a holistic approach to assessment and should help learners to understand the basic skills that need to be developed at each level for each of these outcomes:

- Use Number Sense and Computation
- Use Measurement for Various Purposes
- Solve Geometric Problems
- Manage Data and Probability

The Development of Features

Features for each component learning outcome for the domain of numeracy were developed based on the corresponding skill sets of the numeracy outcomes of the matrix of *Working with Learning Outcomes (1998)*. After careful consideration, the skill sets were synthesized for clarity, consistency and ease of use. The chart on page 56 details the numeracy outcomes and corresponding skill sets of *Working with Learning Outcomes (1998)* compared to the numeracy outcomes and corresponding features of the level descriptions.

The features were developed to reflect all of the skills identified in the skill sets in a more synthesized, useful and clear manner that reflects adult numeracy learning.

As can be seen from the chart on page 56, the features were developed from the skill sets through a process of synthesis and reorganization. For the outcome *Manage Data and Probability*, for example, the following synthesis and reorganization was done:

Component Learning Outcome of Numeracy: Manage Data and Probability	
Working with Learning Outcomes (1998):	The Level Descriptions Manual:
Skill Sets	**Features**
Collecting, organizing, and **analyzing data**	Collecting, organizing, and **displaying data**
Concluding and reporting **Analyzing data**	**Analyzing data** and drawing conclusions
Probability	Probability

**A Comparison of the Numeracy Domain in *Working with Learning Outcomes* (1998)
with the Numeracy Domain of The Level Descriptions Manual**

Working with Learning Outcomes (1998)
The Domain of Numeracy

Component Learning Outcomes	Skill Sets
Perform Basic Operations with Numbers	• Write Numbers • Count • Add and Subtract • Apply Place Value • Multiply and Divide • Construct and Use Fractions, Decimals, Ratios and Percentages • Perform Basic Money Calculations • Use Roots and Exponents
Use Measurement for Various Purposes	• Linear Measurement • Measurement of Time • Measurement of Temperature • Measurement of Capacity, Volume and Mass • Measurement of Perimeter and Area • Measurement Concepts
Solve Geometric Problems	• Three- and Two-Dimensional Geometry • Transformational Geometry • Grids and Co-ordinate Geometry
Manage Data and Probability	• Collecting, Organizing and Analyzing Data • Concluding and Reporting • Probability • Analyzing Data
Use Patterning and Algebra	• Use Patterning and Algebra • Linear Equations

The Level Descriptions Manual
The Domain of Numeracy

Component Learning Outcomes	Features
Use Number Sense and Computation	• Whole Numbers, Decimals and Integers • Fractions, Percents and Ratios
Use Measurement For Various Purposes	• Time • Temperature • Length and Perimeter • Area • Capacity and Volume • Mass
Solve Geometric Problems	• Two- and Three- Dimensional Geometry • Transformational Geometry • Grids and Co-ordinate Geometry
Manage Data and Probability	• Collecting, Organizing and Displaying Data • Analyzing Data and Drawing Conclusions • Probability
(incorporated into Use Number Sense and Computation)	

At times, the skills detailed in a certain skill set were spread out to be represented across features, rather than concentrated in one skill set, to more accurately reflect numeracy learning. That skill set was then dissolved. One example of this is in the outcome, *Use Measurement for Various Purposes*. The skill set *Measurement Concepts* was dissolved and the skills detailed in that skill set through the transition and success markers were represented in performance indicators across the features for that outcome. It was agreed that a learner would most likely learn about measurement concepts when working on learning activities having to do with measuring time, temperature, length and perimeter, for example, and not separately. This is one example of how the numeracy level descriptions team attempted to develop features that more accurately reflect numeracy learning.

The Development of Performance Indicators

The numeracy level descriptions team carefully examined each success and transition marker in the matrix of *Working with Learning Outcomes (1998)*, identifying which were key, and synthesizing closely related markers into performance indicators that are consistent across levels and which identify skills in a clear and easy-to-understand way.

In cases where a success marker was stated or implied at two levels, it was left in the lower level and removed from the higher level. For example, the following success marker appears in both level 4 and level 5 of the outcome, *Manage Data and Probability* in *Working with Learning Outcomes (1998)*: "Evaluates arguments that are based on data analysis." In the level descriptions, this statement appears as a performance indicator at level 4 only.

When the development team found that a success marker described child-oriented concrete materials, teaching methodology, or skill application, the marker was omitted, though its essence, reworked to be appropriate to an adult context, was often given as an example for that feature.

Important elements of adult experiences that did not appear in the matrix of *Working with Learning Outcomes (1998)* were added to the performance indicators of the level descriptions for the numeracy outcomes. For example, units of imperial measurement are still used by many adults and in many situations adults find themselves, for example, in cooking recipes or in building instructions. Many adults living in Ontario still use pounds when talking about weight and inches and feet when talking about height.

As well, an adult learner's goal might require him or her to possess a working knowledge of the most common imperial units. For these reasons, imperial units have been added to the numeracy level descriptions.

Some skills and concepts in the numeracy outcomes that *Working with Learning Outcomes (1998)* does not mention until the higher levels, reflecting a child's intellectual development, have been moved down to the lower levels of the level descriptions. For example, in the matrix of *Working with Learning Outcomes (1998)*, percents are first mentioned at level 4. The numeracy level descriptions team felt that adults could begin to work with some simple percents at a lower level, so "explains common percents (25%, 50%, 100%) in terms of their relationships to common fractions (quarter, half, whole)" was added as a performance indicator at level 2.

Where a skill was spread across levels in a way which did not reflect the context of adult learners, the skill was reworded and moved to more suitable stages. An example is shown in the following chart:

	Working with Learning Outcomes (1998):	The Level Descriptions Manual
	Outcome: *Perform Basic Operations with Numbers*	**Outcome: *Use Number Sense and Computation***
	Skill set: Write Numbers	**Feature:** Whole Numbers, Decimals, and Integers
Level One	Reads and writes numerals from 0 to 100	Reads and writes numbers from 0 to 100
Level Two	Reads and writes numerals from 1 to 1,000	Reads and writes numbers encountered in everyday life

The Development of the Examples

Examples were created for each feature of each outcome in numeracy to help contextualize the skills identified by each performance indicator and within each feature. The examples provide practitioners with ideas for numeracy learning activities, as well as suggested contexts, manipulatives and demonstrations related to the performance indicators, to further illustrate the level of complexity of numeracy skill in everyday activities.

The examples cover several topic areas and relate to several common learner goal paths. The reader will not find an example for every performance indicator; instead, some performance indicators are combined in one example, and other performance indicators appear in more than one example.

• Summary Statements •

Level One

The learner reads and writes whole numbers to 100, adds and subtracts single-digit whole numbers, and understands the concept of "half". The learner names and states the value of Canadian coins and recognizes, describes, and continues simple number patterns.

Level Two

The learner reads and writes whole numbers encountered in everyday life and handles money for daily tasks. The learner adds and subtracts multi-digit numbers, multiplies and divides numbers, and uses common fractions to measure and describe. The learner recognizes and describes number patterns in which one operation is repeated.

Level Three

The learner adds, subtracts, multiplies, and divides whole numbers and decimals; understands the relationship between decimals and fractions; and creates and continues number patterns based on two alternating rules.

Level Four

The learner adds, subtracts, multiplies and divides fractions and integers, and performs simple calculations with percent, ratio, exponents, and square roots. The learner uses a variable to represent an unknown quantity. The learner creates and continues number patterns based on two alternating operations.

Level Five

The learner performs a variety of computations in which fractions, decimals, integers, percent, exponents, and square roots may be integrated. The learner creates and solves algebraic equations.

Summary Statement

The learner reads and writes whole numbers to 100, adds and subtracts single-digit whole numbers, and understands the concept of "half". The learner names and states the value of Canadian coins and recognizes, describes, and continues simple number patterns.

Description of Level One by Feature

Features	Performance Indicators	Examples
Whole Numbers, Decimals, and Integers	• Reads and writes numbers from 0 to 100 • States the value of coins up to $2 • Uses ordinal numbers (e.g., tenth) • Counts by 1s, 2s, 5s and 10s to 100 • Writes and solves simple addition and subtraction sentences (e.g.: 5 + 6 = 11) • Mentally adds one-digit numbers • Identifies the effect of zero in addition and subtraction • Uses the concepts of addition and subtraction to solve simple, real-life word problems • Recognizes, describes, and continues simple number patterns (e.g., counting patterns: 2, 4, 6, 8…)	• Gives and records telephone numbers and addresses • Counts and rolls coins • Completes addition chart • Given a photo or drawing of the finish line of a foot race, identifies who is first, second, and so on • Given a supermarket flyer and a shopping list, locates items and copies prices onto shopping list • Given a calendar and the fact that Thanksgiving is the second Monday in October, determines the actual date • On drawing of an apartment building's floor plan with some apartment numbers identified, continues to identify apartment numbers • Counts by 5 to determine the value of a pile of up to 20 nickels, and discusses this using the word "nickel' (repeat with a pile of up to ten dimes, a pile of up to 50 twonies)
Fractions, Percents, and Ratios	• Uses the term "half" to describe quantities in everyday situations	• Tells time to nearest half hour • Determines what time a break will be taken, if it is to be taken halfway through a class or a morning of work

Summary Statement

The learner reads and writes whole numbers encountered in everyday life and handles money for daily tasks. The learner adds and subtracts multi-digit numbers, multiplies and divides numbers, and uses common fractions to measure and describe. The learner recognizes and describes number patterns in which one operation is repeated.

Description of Level Two by Feature

Features	Performance Indicators	Examples
Whole Numbers, Decimals, and Integers	• Reads and writes numbers encountered in everyday life • Adds and subtracts multi-digit numbers, with and without regrouping • Mentally adds and subtracts one-digit and two-digit numbers • Writes and solves multiplication and division sentences (e.g.: 5 x 6 = 30) • Uses multiplication and division facts and concepts to solve simple, real-life word problems. • Estimates costs for making purchases in everyday life • Identifies numbers that are divisible by 2, 5, and 10 • Recognizes number patterns in addition, subtraction, multiplication, and division facts • Recognizes and describes number patterns in which one operation is repeated. (e.g., 1, 2, 4, 8, 16….multiplying by two every time)	• Fills out cheques • Keeps a record of time worked (studied) and mentally calculates daily and weekly totals • Estimates the amount of change due when a twenty-dollar bill is used to pay for a purchase of less than twenty dollars • Completes multiplication chart • Adds fifteen cents tax to every dollar of an item's price (less than ten dollars) to find the total cost • Determines the value of a missing term in an addition or subtraction sentence (e.g., 4 + ___ = 13, 20 − ___ = 8) • Calculates correct dosage from a pill bottle label
Fractions, Percents, and Ratios	• Uses terms for common fractions (halves, thirds, quarters) to describe and measure quantities in everyday life • Explains common percent (25%, 50%, 100%) in terms of their relationships to common fractions (quarter, half, whole)	• Uses measuring cup and measuring spoons to measure half of a cup, a cup and a half, a third of a cup, two thirds of a cup, half of a teaspoon, a quarter of a teaspoon, in cooking • Measures in half- and quarter-inch increments in crafts • Explains the mathematical ideas to support saying "three quarters of an hour" to mean 45 minutes • Calculates savings in sales announcing "Everything half price!" "Save one third off our regular low prices" • Uses "half", "one quarter", "three quarters", "one third", and "two thirds" to describe how much of a container of food has been eaten and how much is left

Summary Statement

The learner adds, subtracts, multiplies, and divides whole numbers and decimals; understands the relationship between decimals and fractions; and creates and continues number patterns based on two alternating rules.

Description of Level Three by Feature

Features	Performance Indicators	Examples
Whole Numbers, Decimals, and Integers	• Reads, writes, and compares decimal numbers encountered in everyday life • Performs money calculations • Makes change using fewest number of coins • Adds, subtracts, multiplies, and divides multi-digit whole numbers and decimals • Mentally multiplies and divides decimal numbers by 10 and 100 • Determines the value of a missing factor in an equation involving multiplication • Creates and continues patterns that change according to two alternating rules (e.g., 1, 2, 4, 5, 7, 8, 10… adding 1 to the term, then adding 2 to the term)	• Given that provincial sales tax and goods and services tax in Ontario add $1.50 to every $10.00 of an item's price, mentally calculates tax and total cost of purchases • Compares swimmers' times, measured to hundredths, to determine ranking in a race • Converts from centimetres to metres, and from millimetres to centimetres or metres • Shows that 0.3 and 0.30 (and other similar pairs, e.g., .5 and .50) are equal, using drawings and symbols; shows that 0.03 and 0.3 (and other similar pairs) are not equal, using drawings and symbols • Operates a cash register • Calculates unit prices and uses them to identify the "best buy" • Calculates the gas mileage of a compact car and a truck and compares them • Demonstrates equivalence in simple numerical equations using concrete materials, drawings and symbols (e.g., 13 + 7 = 19 +1) • Notices and explains pattern in charts of life insurance premiums
Fractions, Percents, and Ratios	• Uses fraction terminology and notation (proper, improper, numerator, denominator, simplify, three-eighths, 3/8) • Expresses fractions represented in diagrams as words & symbols • Generates multiples and factors of given numbers in order to find equivalent fractions • Compares fractions by rewriting with a common denominator • Converts fractions to decimals and *vice versa* • Expresses a fraction with a denominator of 100 as a percent	• Given jumbled pile of drill bits, puts them back into labeled slots in carrying case – in order from smallest to largest • Given labeled boxes of screws, puts them in order from the box containing the longest screws to the box containing the shortest screws (open boxes and compare actual screws to check work) • Expresses the remainder of a division problem as a fraction when appropriate • Given written instructions in Metric for cutting out paper squares and rectangles of different sizes, but a ruler in inches, converts the measurements and cuts out the shapes • Given several mortgage interest rates, ranks them and chooses the lowest • Calculates discounts when given a regular price and any percent, by changing the percent to a decimal and multiplying it by the amount using a calculator or pencil and paper

Summary Statement

The learner adds, subtracts, multiplies and divides fractions and integers, and performs simple calculations with percent, ratio, exponents, and square roots. The learner uses a variable to represent an unknown quantity. The learner creates and continues number patterns based on two alternating operations.

Description of Level Four by Feature

Features	Performance Indicators	Examples
Whole Numbers, Decimals, and Integers	• Chooses appropriate methods of computation to solve problems (e.g., estimation vs. accurate calculation) • Compares and orders integers (e.g., on a number line) • Adds, subtracts, multiplies and divides integers • Uses exponent and square root notations to represent repeated multiplication & to describe perfect squares • Performs simple calculations with exponents & square roots • Applies the order of operations • Extends a pattern, completes a table, and uses appropriate language to explain the pattern • Understands that a variable is a symbol that may be replaced by a given set of numbers (e.g., "x" as an unknown number) • Translates simple statements into algebraic expressions or equations and vice versa • Solves equations of the form ax = c and ax + b = d by inspection and systematic trial, using whole numbers • Creates and continues number patterns based on two alternating operations (e.g., 1, 3, 7, 15, 31, …doubling each term and adding one to get the next term)	• Given a list of descriptions of situations in which calculations are to be performed, states which ones require exact answers and which ones need only estimates • Solves problems involving changing temperatures, above and below zero • Given a map of time zones, calculates times and time changes • Given the dimensions of different freezers, sketches them and calculates their capacities • Given the area of a rectangle, calculates its possible dimensions • Given the capacity of a box, calculates its possible dimensions • Converts Celsius degrees to Fahrenheit and vice versa
Fractions, Percents, and Ratios	• Adds, subtracts, multiplies, and divides fractions • Converts between fractions, decimals and percent • Explains the meaning of percent and ratios used in everyday situations • Solves simple, real-life problems involving fractions, percent and ratios	• Given the populations of several Ontario cities, and the number of people in each city who own cars, creates percents to compare the proportions of car owners across cities • Doubles or halves a recipe • Mixes oil and gas appropriately for use in a lawn mower • Given a regular price and a percent to be discounted, calculates total cost, including provincial sales tax and goods and services tax • Makes iced tea from water and iced tea powder by following instructions on iced tea container (not by tasting!) • Given a cup of 2% yogurt, calculates how much of a person's daily fat allowance it contains • Calculates the income for a salesperson, given their wage and rate of commission • Discusses results of opinion polls as reported in the news • Uses map scales to calculate actual distances from map distances

Summary Statement

The learner performs a variety of computations in which fractions, decimals, integers, percent, exponents, and square roots may be integrated. The learner creates and solves algebraic equations.

Description of Level Five by Feature

Features	Performance Indicators	Examples
Whole Numbers, Decimals, and Integers	• Demonstrates proficiency in calculations involving rate, exponents, integers, and square roots • Mentally divides numbers by 0.1, 0.01, and 0.001 • Estimates and uses a calculator to find close approximation for square roots of non-perfect squares • Expresses very large, very small numbers using scientific notation • Writes an algebraic expression to describe a number pattern • Evaluates simple algebraic expressions, with up to three terms, by substituting fractions and decimals for the variables • Solves problems involving linear equations and in equations using formal methods • Graphs relationships using a variety of methods and technologies	• Given speed and distance, calculates travel time of a car trip • Given time and distance, calculates speed of bike travel • Discusses and compares huge distances in space using scientific notation (e.g., Earth is 1.4864 x 109 km from the sun, and Mercury is 5.76 x 107 from the sun; Which planet is closer to the sun?) • Given 25 = 3n + 4, solves for n • Draws the graph of y = 2x + 3 • Evaluates 7x − 10y + 6z, given x = 4, y = 3, z = 0.75. • Draws a circle, given its area • Calculates compound interest • Calculates normal blood pressure for different age groups
Fractions, Percents, and Ratios	• Solves multi-step numerical and word problems involving fractions, decimals, percent and ratios • Evaluates algebraic expressions containing fractions, decimals, percent and ratios, using the correct order of operations	• Draws figures to scale • Reads blueprints

• Summary Statements •

Level 1　　　　The learner measures length, perimeter, area, capacity, mass, time and temperature using non-standard units, and describes measurement attributes using everyday language.

Level 2　　　　The learner measures length, perimeter, area, capacity, mass, time and temperature using common standard units and describes the relationships among units of measure.

Level 3　　　　The learner measures length, capacity, volume, mass, time and temperature with precision using appropriate standard units, and calculates the perimeter and area of rectangles and squares using formulas.

Level 4　　　　The learner calculates the area of parallelograms, triangles and trapezoids, and the volume and surface area of rectangular prisms using formulas.

Level 5　　　　The learner calculates the surface area of prisms, pyramids and cylinders, the volume and surface area of prisms, and the radius, diameter, circumference and area of a circle using formulas.

Use Measurement for Various Purposes

Level 1

Summary Statement

The learner measures length, perimeter, area, capacity, mass, time and temperature using non-standard units, and describes measurement attributes using everyday language.

Description of Level One by Feature

Features	Performance Indicators	Examples
Time	• Estimates and compares the duration of activities • Names the days of the week and months of the year in order • Reads and writes time to the hour and half-hour using analog clocks	• Estimates, measures and records time spent sleeping every night for a week (to the nearest half hour), and compares to other students • Given a month as a number (e.g., 8), determines the name of the month (e.g., August)
Temperature	• Relates temperature to daily activities	• Given photographs of people in different seasons, estimates and discusses possible temperatures (e.g., hot (near 30 degrees Celsius), nice (between 25 and 10 degrees Celsius), cool (between 10 and 0 degrees Celsius), cold (below zero) • Regularly discusses temperature in room and outside, and compares impressions with those of other students
Length and Perimeter	• Compares the length of two objects • Describes dimensions using everyday language (e.g., height, length)	• Sorts a pile of screws of various lengths • Measures shelf paper using a handy unit, perhaps a hand span (e.g., I need a piece that's two hand spans long)
Area	• Estimates and counts the number of uniform and non-uniform shapes that will cover a surface	• Estimates the number of vinyl self-adhesive tiles that will cover a floor space, then lays them out to check • Estimates how many placemats will cover a table
Capacity and Volume	• Estimates, measures and compares the capacity of containers using non-standard units	• Estimates which of two empty cereal boxes holds more, then fills one of them with something (e.g., small pieces of Styrofoam) and sees if that amount will fit into the other box, to check estimate
Mass	• Estimates, measures and compares the mass of objects using non-standard units	• Guesses how many of one object will equal the mass of another heavier object, and uses a simple balance to check

Summary Statement

The learner measures length, perimeter, area, capacity, mass, time and temperature using common standard units and describes the relationships among units of measure.

Description of Level Two by Feature

Features	Performance Indicators	Examples
Time	• Explains the relationship among seconds, minutes, hours, days, weeks, months and years • Estimates and measures the passage of time in five-minute intervals, days, weeks, months, and years • Reads and writes time to the nearest minute using digital clocks, and to the nearest five minutes using analog clocks	• Discusses how long ago things happened (e.g., how long ago the space shuttle exploded, how long ago the learner was last in school, how long ago the learner got married, how long ago the learner last went swimming) • Estimates how long it takes to travel places in the course of daily activities • Writes daily schedule, recording times accurately
Temperature	• Estimates, reads and records temperature to the nearest degree Celsius, and comments on changes	• Reads temperature on a candy thermometer while cooking • Reads temperature on a thermometer in the room or outside the building
Length and Perimeter	• Explains the relationship among centimetres, metres and kilometres, and between inches and feet • Estimates and measures length using centimetres, metres or kilometres, having first selected the most appropriate unit • Measures and compares perimeter using centimetres and metres	• Measures the length of his or her pace, and uses this to estimate distances, (e.g., the dimensions of a room.) • Given an appliance whose cord is too short to reach the nearest electrical outlet, and a selection of coiled extension cords whose different lengths are labeled, chooses a cord that is long enough • Times how long it takes him or her to walk a kilometre and uses this to estimate other distances in kilometres • Determines whether a dog owner can change the shape of his dog's pen without having to buy any new fencing, or whether someone's old backyard fencing is long enough to fit around a different area to where he is considering moving it (comparing perimeters measured in metres and centimetres) • Given planks of different lengths, first estimates and then measures their length, and evaluates his or her estimates
Area	• Estimates and measures the area of shapes using uniform non-standard units (e.g., squares), and compares and orders the shapes by area	• Given shapes drawn on a blackboard, estimates which is largest and which is smallest, then measures their area by counting how many times the blackboard eraser can be stamped into them, to check estimates
Capacity and Volume	• Estimates, measures and compares the capacity of containers using millilitres or litres	• Given empty yogurt containers and glass bottles, estimates their volume and then uses water and a measuring cup to measure and evaluate estimates
Mass	• Estimates, measures and compares the mass of objects using grams, kilograms or pounds	• Uses supermarket scales to measure the mass of produce after first estimating

Use Measurement for Various Purposes

Level 3

Summary Statement

The learner measures length, capacity, volume, mass, time and temperature with precision using appropriate standard units, and calculates the perimeter and area of rectangles and squares using formulas.

Description of Level Three by Feature

Features	Performance Indicators	Examples
Time	• Estimates, measures and compares time intervals to the nearest second • Reads and writes dates using SI notation (e.g., June 30, 1998, is written 1998 06 30) • Reads an analog clock to the nearest second and writes the time to the nearest minute • Explains the relationship among years, decades, centuries and millenniums • Identifies the relationship between the movement of objects and speed (e.g., measure the time it takes to travel a distance)	• At an intersection with street lights, estimates the amount of time that each direction of traffic has, then measures it with a stopwatch, and compares this time to that at other intersections • Measures how long it takes to walk a kilometre, changes that measurement into km/h, and compares it to the speed of a car.
Temperature	• Measures temperatures to tenths of a Celsius degree	• Measures and records a person's body temperature
Length and Perimeter	• Estimates and measures length of objects using millimetres, centimetres and metres • Estimates and measures distances using metres and kilometres • Draws shapes and simple items using various units of length (e.g., a triangle with 9-cm sides) • Measures circumference using concrete materials (e.g., measuring tape) • Explains and applies formulas for calculating the perimeter of rectangles and squares	• Measures and cuts wallpaper accurately • Makes crafts that involve accurate linear measurement
Area	• Explains and applies formulas for calculating the area of rectangles and squares • Measures the area of polygons and irregular two-dimensional shapes using grid paper • Selects the most appropriate standard unit (square centimetre or square metre) to measure the area of polygons of different sizes	• Given different irregular polygons (from ones drawn on paper to ones outlined with masking tape on the floor), a paper square centimetre and a paper square metro, chooses which square unit to use to measure each polygon • Uses the square units above to measure the given shapes, and develops and explains shortcuts and tools to facilitate measuring area
Capacity and Volume	• Explains the relationship between millilitres and litres • Selects the most appropriate unit (millilitre, litre) to estimate and measure capacity • Measures volume of containers using cubic centimetres • Explains the relationship between millilitres and cubic centimetres	• Dilutes cleaning liquids or plant food
Mass	• Explains the relationship between grams and kilograms, and kilograms and tonnes • Selects the most appropriate unit (gram, kilogram, tonne) to estimate and measure mass	• Identifies and uses familiar items to represent one gram, one kilogram, and one tonne, and then uses these familiar approximations to estimate the mass of other objects

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THE LEVEL DESCRIPTIONS MANUAL

Use Measurement for Various Purposes   Level 4

Summary Statement

The learner calculates the area of parallelograms, triangles and trapezoids, and the volume and surface area of rectangular prisms using formulas.

Description of Level Four by Feature

Features	Performance Indicators	Examples
Time	• Describes the relationship between a 12-hour clock and a 24-hour clock • Relates time and distance and speed (e.g., kilometres per hour)	• Reads and understands bus, train or airplane schedules that use the 24-hour clock • Estimates and then calculates the time it will take to travel a given distance at a given speed
Temperature	• Converts between degrees Fahrenheit and degrees Celsius	• Given the weather page of a newspaper from a city in the United States and the weather page of the local newspaper, converts the temperatures of all cities to one unit (Fahrenheit or Celsius) and compares them
Length and Perimeter	• Estimates, measures and calculates the perimeter of irregular two-dimensional shapes (e.g., trapezoid, hexagon)	• Uses string and a ruler or metre stick to measure the perimeter of an irregular polygon, and compares this calculation to the result of measuring each side with the ruler and summing the measurements of the sides
Area	• Finds the area of irregular two-dimensional shapes by decomposing the figure into simple two-dimensional shapes • Explains and applies formulas for finding the area of parallelograms, triangles, trapezoids • Sketches a rectangle, square, triangle, parallelogram or trapezoid given its area • Explains and applies a formula for finding the surface area of a rectangular prism	• Finds the area of an irregular-shaped patch of ground in order to determine how much grass seed is needed to make it into a lawn • Sketches the floor plan of an apartment • Estimates how much wood stain is needed to cover the surfaces of a shed
Capacity and Volume	• Explains and applies a formula for the volume of a rectangular prism • Sketches a rectangular prism given its volume	• Calculates the volume of two boxes to determine which will hold more • Calculates the volume of a refrigerator
Mass	• Determines the relationships among milligrams, grams, kilograms and tonnes, and between ounces and pounds	• Reads and interprets nutritional information shown on food packages • Reads and understands amounts on drug prescriptions

Use Measurement for Various Purposes

Level 5

Summary Statement

The learner calculates the surface area of prisms, pyramids and cylinders, the volume and surface area of prisms, and the radius, diameter, circumference and area of a circle using formulas.

Description of Level Five by Feature

Features	Performance Indicators	Examples
Time		
Temperature		
Length and Perimeter		
Area	• Explains and applies formulas for the surface area of prisms, pyramids and cylinders • Constructs regular two-dimensional figures with a given area • Estimates and measures the radius, diameter, circumference and area of a circle using concrete materials and formulas • Draws a circle given its area and/or circumference • Measures area in square feet in appropriate situations (e.g., construction)	• Determines the amount of paint needed to cover several cylindrical columns • Compares the area of a circular cake pan to the area of a rectangular one • Finds the square footage of a dwelling
Capacity and Volume	• Explains and applies the formula for the volume of prisms, pyramids, cylinders and cones • Sketches and constructs regular three-dimensional figures with a given volume • Estimates and measures the volume of irregular three-dimensional figures using appropriate units	• Given that a child's wading pool holds a certain amount of water and has a certain height, uses formulas to determine if it will fit into a space that has a certain width • Given diagrams of three-dimensional figures, with measurements shown, remembers and uses appropriate formulae to calculate volumes
Mass		

• Summary Statements •

Level 1   The learner identifies, describes, compares and classifies basic two- and three-dimensional figures, and recognizes and creates symmetrical figures.

Level 2   The learner identifies, describes, compares and classifies various polygons, prisms and pyramids, and determines lines of symmetry for two-dimensional shapes. The learner identifies and performs transformations.

Level 3   The learner identifies, describes, compares and classifies quadrilaterals and triangles, and identifies and constructs similar, congruent and symmetrical figures. The learner identifies and applies transformations. The learner locates points on maps and grids using a coordinate system.

Level 4   The learner designs nets for three-dimensional figures, and identifies and constructs two-dimensional shapes that meet certain criteria. The learner applies transformations to create and analyze designs and tiling patterns. The learner locates coordinate points in the first quadrant of a Cartesian plane.

Level 5   The learner describes and applies the angle properties of triangles, and intersecting, parallel and perpendicular lines. The learner constructs circles given centre points and points on the circle. The learner solves problems using the Pythagorean relationship. The learner plots points and graphs lines on a Cartesian plane.

Solve Geometric Problems

Summary Statement

The learner identifies, describes, compares and classifies basic two- and three-dimensional figures, and recognizes and creates symmetrical figures.

Description of Level One by Feature

Features	Performance Indicators	Examples
Two- and Three-Dimensional Geometry	• Identifies, describes, compares and classifies circles, squares, rectangles and triangles • Identifies, describes, compares and classifies cubes, cones, cylinders and spheres	• Names shapes of road signs, warning labels on cleaning products, and washing symbols on clothing, and sorts them accordingly (two-dimensional shapes) • Compares wooden cylinder (from an educational kit) to cylinders encountered in everyday life (e.g., food containers, rolled coins, drinking glasses); does the same for other three dimensional shapes.
Transformational Geometry	• Recognizes symmetry in the environment • Describes and creates symmetrical figures • Uses language to describe position (e.g., over, to the right of)	• Given photographs of building facades, identifies which are symmetrical about a vertical line down their centre • Given a diagram of one half of a flower bed, draws the other half so that the bed is symmetrical • Gives simple, short directions to help someone find a place or an object
Grids and Coordinate Geometry		

Summary Statement

The learner identifies, describes, compares and classifies various polygons, prisms and pyramids, and determines lines of symmetry for two-dimensional shapes. The learner identifies and performs transformations.

Description of Level Two by Feature

Features	Performance Indicators	Examples
Two- and Three-Dimensional Geometry	• Identifies and describes two-dimensional shapes (e.g., quadrilaterals, pentagon, hexagon, octagon) • Compares and sorts two-dimensional shapes according to two or more geometric attributes (e.g., number of sides, number of vertices) • Describes congruent two-dimensional shapes • Identifies and describes prisms and pyramids (e.g., square-based pyramid, triangular prism) • Compares and sorts three-dimensional figures according to two or more geometric attributes (e.g., number of faces, number of edges)	• Given photographs of patterns in an urban landscape (e.g., tiling, brickwork), names the shapes that appear. • Using drawing software, draws and discusses congruent shapes • Identifies geometric shapes used in construction • Describes the shapes of everyday objects using the language of geometry, e.g., "This paperback book is a triangular prism."
Transformational Geometry	• Determines lines of symmetry for two-dimensional shapes • Identifies and performs transformations (reflections, translations, and rotations) of 2-dimensional figures	• Follows a commercial sewing pattern in cutting out material for a simple item • Determines the path of a piece of paper through a photocopier, in order to photocopy onto letterhead
Grids and Coordinate Geometry	• Describes the specific location of objects on a map or grid (e.g., beside, to the left of)	• Uses a multiplication or addition chart • Plays "battleship" • Given simple map of familiar area with simple grid imposed, locates and gives the location of landmarks, using grid labels

Summary Statement

The learner identifies, describes, compares and classifies quadrilaterals and triangles, and identifies and constructs similar, congruent and symmetrical figures. The learner identifies and applies transformations. The learner locates points on maps and grids using a coordinate system.

Description of Level Three by Feature

Features	Performance Indicators	Examples
Two- and Three- Dimensional Geometry	• Sorts and classifies quadrilaterals (e.g., parallelogram, rhombus) and triangles (e.g., obtuse, scalene) according to angles and sides properties • Identifies, describes and constructs similar and congruent figures • Measures and constructs angles using a protractor • Constructs quadrilaterals and triangles given specific measures of angles and sides • Sketches faces of three-dimensional figures • Identifies and constructs nets for a variety of polyhedra	• Given a small box, takes it apart so that it is one flat shape, and uses that to make other flat pieces of paper (or card) that can be folded into boxes (identifying and constructing nets) • Draws plans for craft activity from detailed instructions • Given a drawing of a three-dimensional shape and several drawings of nets, chooses the net that represents the shape • Uses a compass and a framing square to measure angles in the environment and then draws simple diagrams of the angles
Transformational Geometry	• Constructs two-dimensional shapes with one line of symmetry • Describes and applies translations, reflections and rotations • Constructs tiling patterns to cover a plane	• Describes the arrangement of repeating images in fabrics, decorative woodwork
Grids and Coordinate Geometry	• Locates points on maps and grids using a coordinate system	• Uses the index of a map to locate places • Uses a map of a stadium to identify preferred seat number

Summary Statement

The learner designs nets for three-dimensional figures, and identifies and constructs two-dimensional shapes that meet certain criteria. The learner applies transformations to create and analyze designs and tiling patterns. The learner locates coordinate points in the first quadrant of a Cartesian plane.

Description of Level Four by Feature

Features	Performance Indicators	Examples
Two- and Three-Dimensional Geometry	• Identifies two-dimensional shapes that meet certain criteria (e.g., an isosceles triangle with a 40° angle) • Explains why two shapes are similar or congruent by measuring angles and sides and matching corresponding parts • Estimates the size of angles within a reasonable range • Recognizes the front, side, and back views of three-dimensional figures • Designs nets for three-dimensional figures (cubes and pyramids)	• Matches the drawings in an appliance's owner's manual to parts of the actual appliance, in order to learn how it works
Transformational Geometry	• Identifies and constructs two-dimensional shapes with more than one line of symmetry • Creates and analyzes designs that include translated, rotated and reflected two-dimensional images • Constructs and analyzes tiling patterns with congruent tiles	• Uses drawing software to draw and then flip, rotate and slide shapes to be arranged in decorative patterns for use in the classroom or home
Grids and Coordinate Geometry	• Locates and plots coordinate points in the first quadrant of a Cartesian plane	• Given the first quadrant of a Cartesian plane, has coordinates dictated, and joins them with lines to form shapes and drawings

Solve Geometric Problems   Level 5

Summary Statement

The learner describes and applies the angle properties of triangles, and intersecting, parallel and perpendicular lines. The learner constructs circles given centre points and points on the circle. The learner solves problems using the Pythagorean relationship. The learner plots points and graphs lines on a Cartesian plane.

Description of Level Five by Feature

Features	Performance Indicators	Examples
Two- and Three-Dimensional Geometry	• Explains and applies the angle properties of intersecting, parallel and perpendicular lines • Solves angle measurement problems for triangles • Constructs a circle given its centre and radius, its centre and a point on the circle, or three points on the circle • Applies the Pythagorean relationship to solve problems involving area and right triangles	• Applies knowledge of angle properties to read and create technical drawings and blueprints • Draws circles (crafts, sewing, carpentry) • Applies Pythagorean theorem (construction of stairs, surveying)
Transformational Geometry	• Creates original designs using geometric patterns	• Creates geometric patterns and designs (wood carving, page borders, calligraphy)
Grids and Coordinate Geometry	• Plots points on the *xy*-plane and uses the terminology and correct notation of the *xy*-plane • Graphs lines using a variety of techniques (e.g., making a table of values, using intercepts, using the slope and *y*-intercept)	• Creates line graphs on grids to show growth over time (temperature changes, investments, profit/loss)

• Summary Statements •

Level 1   The learner collects and sorts a small number of simple data, displays these data on given charts and pictographs, and discusses these displays of data. The learner uses everyday language to discuss probability as part of familiar experience.

Level 2   The learner conducts surveys using self-generated questions, selects appropriate graphic organizers to sort data, and constructs simple bar graphs to display data. The learner interprets data on graphs and tables, and expresses understanding in a variety of ways. The learner predicts the results of simple probability experiments and carries them out.

Level 3   The learner designs and conducts surveys, records results on tally charts and spreadsheets, and displays data on labeled graphs. The learner calculates the mean and mode of a set of data, and identifies the important features of data collected by others. The learner conducts simple probability experiments and uses the results to make decisions.

Level 4   The learner collects and organizes data from primary and secondary sources, and decides on the best method of display. The learner identifies trends, calculates measures of central tendency, and makes inferences and convincing arguments based on a variety of displays of data. The learner conducts probability experiments, compares theoretical and actual results, and applies probability in familiar contexts.

Level 5   The learner designs and carries out experiments to test hypotheses and uses data in databases and spreadsheets to solve problems. The learner explains sampling techniques, and recognizes misuse of data in advertising and news reports. The learner calculates complex probabilities and applies probability in a variety of contexts.

Summary Statement

The learner collects and sorts a small number of simple data, displays these data on given charts and pictographs, and discusses these displays of data. The learner uses everyday language to discuss probability as part of familiar experience.

Description of Level One by Feature

Features	Performance Indicator	Examples
Collecting, Organizing and Displaying Data	• Collects first-hand data by counting objects, measuring, performing simple experiments and conducting surveys with yes/no questions • Sorts objects or data according to one attribute • Organizes materials on given charts, concrete graphs and pictographs using one-to-one correspondence	• Surveys class: "Should we have background music in class?", tallies responses, and presents results • Places given photographs of grocery items into appropriate sections of diagram of supermarket • Writes important dates on a calendar
Analyzing Data and Drawing Conclusions	• Reads graphs made with concrete materials, and demonstrates understanding of the data in a variety of ways	• Reads Canada Food Guide icons for number of recommended daily portions • Reads opening and closing times on a store's door
Probability	• Discusses probability as part of familiar experiences	• Describes probability in everyday language, (e.g., "I never …, I sometimes…, I always…, she probably will…, it's impossible that…,")

Summary Statement

The learner conducts surveys using self-generated questions, selects appropriate graphic organizers to sort data, and constructs simple bar graphs to display data. The learner interprets data on graphs and tables, and expresses understanding in a variety of ways. The learner predicts the results of simple probability experiments and carries them out.

Description of Level Two by Feature

Features	Performance Indicator	Examples
Collecting, Organizing and Displaying Data	• Collects first-hand data from observation, and conducts surveys using self-generated questions having finite number of responses • Selects appropriate graphic organizer (e.g., chart, web, Venn diagram) and organizes data in graphic organizers using two or more criteria • Constructs bar graphs with discrete classes on one axis and number on the other using scales with multiples of 2, 5, and 10	• Surveys to find out: "Where do you get your news from?", with possible answers being: TV, radio, newspapers, friends, none of the above • Notes weather (e.g., sunny, overcast, raining, snowing) daily for a month, and presents observations in a calendar and in a graph
Analyzing Data and Drawing Conclusions	• Identifies attributes and rules in pre-sorted sets • Relates real things to number on a graph with many-to-one correspondence • Poses questions about data on graphs and tables, interprets data and expresses understanding in a variety of ways	• Explains how items in a grocery store are organized in aisles and sections • Given a bar graph showing the average rents in familiar cities, identifies the highest and lowest averages as well as other significant information
Probability	• Predicts the results of simple probability experiments, and carries them out • Predicts probability that an event will occur	• Tosses a die or flips a coin to investigate probability • Predicts whether something will happen, in a familiar situation, gives reasons for prediction, evaluates prediction (e.g., player making it to third base, drawing a winning card in poker).

Manage Data and Probability

Summary Statement

The learner designs and conducts surveys, records results on tally charts and spreadsheets, and displays data on labeled graphs. The learner calculates the mean and mode of a set of data, and identifies the important features of data collected by others. The learner conducts simple probability experiments and uses the results to make decisions.

Description of Level Three by Feature

Features	Performance Indicator	Examples
Collecting, Organizing and Displaying Data	• Predicts possible results of data collection • Designs surveys, collects data, and records results on given tally charts and spreadsheets • Calculates the ranges, and chooses and explains appropriate graph intervals for different sets of data • Displays data on labeled graphs (title, labeled axes, labeled intervals) made by hand and by a computer application, using many-to-one correspondence	• Surveys neighbours to find the ages of residents in each household, and displays the results • Records and graphs the temperature of water as it heats and boils, and/or cools and freezes • Records the electricity use of household appliances, and creates a bar graph to compare them
Analyzing Data and Drawing Conclusions	• Identifies the use of data in the world around him/her • Calculates the mean and the mode of a set of data • Explains how data were collected and describes the reasonableness of the results • Discusses the important features of data presented in tables, charts and graphs • Recognizes that graphs, tables and charts can present data with objectivity or bias	• Points out charts and tables in a newspaper and comments on their salient features • Calculates the mean and the mode of ages of participants in literacy program • Given two different graphs of the same data on a relevant topic, identifies what is emphasized by each display, and decides which is preferable
Probability	• Conducts simple probability experiments (i.e., predicts results, records results in tree diagrams, compares predicted results with experimental results) and uses the results to make decisions • Connects real-life statements with probability concepts and vocabulary • Poses and solves simple problems involving probability	• Conducts an experiment to answer the question, "What number should you choose if you want to have the best chance of predicting the sum of two rolled dice?" • Explains the mathematical meaning of "against the odds," "his chances are fifty-fifty," "she has a one in five chance."

Summary Statement

The learner collects and organizes data from primary and secondary sources, and decides on the best method of display. The learner identifies trends, calculates measures of central tendency, and makes inferences and convincing arguments based on a variety of displays of data. The learner conducts probability experiments, compares theoretical and actual results, and applies probability in familiar contexts.

Description of Level Four by Feature

Features	Performance Indicator	Examples
Collecting, Organizing and Displaying Data	• Organizes simple data collected by learners and more complex data collected by others on stem-and-leaf plots and frequency tables • Searches databases for specific information • Explains the difference between a spreadsheet and a database • Constructs scatter plots by hand and using a computer application • Tries a variety of displays of the same data using computer applications, and selects the type of graph that best represents the data • Explains how the choice of interval affects the appearance of data	• Puts data from Statistics Canada web site on hours of TV watching across Canada, or other relevant subject, into a spreadsheet, and graphs it several ways, then evaluates the displays • Searches Statistics Canada on-line database for info on apartment rents in Canadian cities
Analyzing Data and Drawing Conclusions	• Identifies the pervasive use of data • Calculates mean, median and mode, and uses them to describe data • Identifies and describes trends in graphed data, using informal language • Makes inferences and convincing arguments based on the analysis of tables, charts and graphs • Analyzes bias in data-collection methods, explains the impact that statistical methods have on decision-making, and recognizes that different kinds of graphs emphasize different relationships among data • Evaluates arguments that are based on data analysis • Uses data presented on graphs to solve problems	• Given a table of data rating appliances, chooses best one to buy • Calculates the mean, median and mode of the salaries of employees in a small company, and evaluates the usefulness of each statistic • Explains how statistics in an advertisement have been presented to make the product being promoted look especially good
Probability	• Lists the possible outcomes of simple experiments, using tree diagrams, modeling and lists; identifies the favourable outcomes among the total number of possible outcomes and states the associated probability; and examines experimental probability results in light of theoretical results • Applies a knowledge of probability in familiar contexts • Explains how probability is used to make decisions in everyday contexts	• Finds out the probabilities of picking various combinations from a bag containing 4 red pieces of paper, 6 white pieces and 2 black pieces • Studies life insurance premium chart and explains how concepts of probability are used to make it • Explains a baseball decision to start a left-handed pitcher or to intentionally walk a batter

Summary Statement

The learner designs and carries out experiments to test hypotheses and uses data in databases and spreadsheets to solve problems. The learner explains sampling techniques, and recognizes misuse of data in advertising and news reports. The learner calculates complex probabilities and applies probability in a variety of contexts.

Description of Level Five by Feature

Feature	Performance Indicator	Examples
Collecting, Organizing and Displaying Data	• Designs and carries out an experiment to test a hypothesis • Explains the relationship between a sample and a whole population, explains randomness and its importance, and recognizes an appropriate sample for a survey • Identifies the structure of databases and spreadsheets, and manipulates data in them • Constructs comparative bar graphs and histograms, by hand and using a computer application	• Surveys some city bus riders about what makes a good bus driver, and what makes a bad bus driver, and presents the results to the transit company • Given a survey topic and purpose, describes an appropriate survey population, and an appropriate and feasible sampling method
Analyzing Data and Drawing Conclusions	• Explains and applies the concept of the best measure of central tendency • Uses quantitative data in databases and spreadsheets to solve problems • Recognizes poor sampling techniques, distortion of graphs, and misuse of data in advertising and news reports	• Given a set of data (tally sheet, table of frequencies, and graph) on a relevant subject, decides if the mode, median or mean gives useful information
Probability	• Identifies 0 to 1 as a range from impossibility ("never happens") to certainty ("always happens") when investigating probability • Calculates complex probabilities from tree diagrams and lists • Uses simple probability experiments to model events that cannot be verified directly • Applies a knowledge of probability in a variety of contexts	• Explains how probability measures, presented as decimals, percents and ratios, are used in calculating health risks, forecasting the weather, or calculating life insurance premiums • Calculates the probabilities of certain outcomes when one tosses a coin and rolls a die at the same time

Glossary of Mathematical Terms

A

Acute angle: An angle measuring less than 90°.

Algebraic expression: One or more variables and possibly numbers and operation symbols. For example, 3x + 6, x, and 5x are algebraic expressions.

Analog clock: A timepiece that indicates the time through the position of its hands.

Area: The number of square units needed to cover a surface

Attribute: A quantitative or qualitative characteristic of an object or a shape, for example, colour, size, thickness.

Axis: The reference line for a graph or other figure. The x-axis represents the horizontal axis, while the y-axis represents the vertical axis.

B

Bar graph: See under graph.

Bias: An emphasis on characteristics that are not typical of an entire population.

Broken-line graph: See under graph.

C

Calculation method: Calculation methods include estimation, mental calculation, pencil-and-paper computation, and the use of technology (including calculators, computer spreadsheets).

Capacity: The amount of fluid that a container can hold.

Cartesian coordinate grid: See coordinate plane.

Cartesian plane: See coordinate plane.

Census: The counting of an entire population.

Circle graph: See under graph.

Circumference: The distance around a circle.

Comparative bar graph: See under graph.

Computer spreadsheet: Software that helps to organize information using rows and columns.

Concrete graph: See under graph.

Cone: A three-dimensional figure with a circular base and a curved surface that tapers proportionately to an apex.

Congruent figures: Geometric figures that have the same size and shape.

Coordinate plane: A plane that contains an X-axis (horizontal) and a Y-axis (vertical). Also called Cartesian coordinate grid or Cartesian plane.

Coordinates: An ordered pair used to describe a location on a grid or plane. For example, the coordinates (3, 5) describe a location on a grid found by moving 3 units horizontally from the origin (0, 0) followed by 5 units vertically.

D

Data: Facts or information.

Database: An organized and sorted list of facts or information; usually generated by a computer.

Diameter: A line segment that joins two points on the circumference of a circle and passes through the centre.

Double bar graph: See comparative bar graph under graph.

E

Equation: A mathematical statement that has equivalent terms on either side of the equal sign.

Equilateral triangle: A triangle with all three sides of equal length.

Equivalent fractions: Fractions that represent the same part of a whole or group, for example, 1/3 , 2/6, 3/9, 4/12.

Equivalent ratios: Ratios that represent the same fractional number or amount, for example, 1:3, 2:6, 3:9.

Estimation Strategies. Mental mathematics strategies used to obtain an approximate answer.

Students estimate when an exact answer is not required and estimate to check the reasonableness of their mathematics work. Some estimation strategies are:

- *Clustering:* A strategy used for estimating the sum of numbers that cluster around one particular value. For example, the numbers 42, 47, 56, 55 cluster around 50. So estimate 50 + 50 + 50 + 50 = 200.

- *Front-end loading:* The addition of significant digits (those with the highest place value) with an adjustment of the remaining values. Also called front loading. The following is an example of front-end loading:

Step 1 - Add the first digits in each number.

193 + 428 + 253

Think 100 + 400 + 200 = 700.

Step 2 - Adjust the estimate to reflect the size of the remaining digits.

93 + 28 + 53 is approximately 175.

Think 700 + 175 = 875.

- *Rounding:* A process of replacing a number by an approximate value of that number. For example, rounding to the nearest tens for 106 is 110.

Experimental probability: The chance of an event occurring based on the results of an experiment.

Expression: A combination of numbers and variables without an equal sign, for example, 3x + 5.

F

Factor: A numbers that are multiplied by one or more numbers.

Finite: Having a limit or limits; countable.

Flip: See reflection.

Formula: A set of ideas, words, symbols, figures, characters, or principles used to state a general rule. For example, the formula for the area of a rectangle is A = l x w.

G

Graph: A representation of data in a pictorial form. Some types of graphs are:

- *Bar graph:* a diagram consisting of horizontal or vertical bars that represent data.
- *Broken-line graph:* on a coordinate grid, a display of data formed by line segments that join points representing data.
- *Circle graph:* a graph in which a circle used to represent a whole is divided into parts that represent parts of the whole.
- *Comparative bar graph: a* graph consisting of two or more bar graphs placed side by side to compare the same thing. Also called double bar graph.
- *Concrete graph:* a graph in which real objects are used to represent pieces of information.
- *Histogram:* a type of bar graph in which each bar represents a range of values, and the data are continuous.
- *Pictograph*: a graph that illustrates data using pictures and symbols.

H

Histogram: See under graph.

Hypothesis: A statement or proposition that may or may not be true but is used as a basis for further investigation.

I

Improper fraction: A fraction whose numerator is greater than its denominator, for example, 12/5.

Inequality: A statement using symbols to show that one expression is greater than (>), less than (<), or not equal to another expression.

Integer: Any one of the numbers. . . , –4, –3, –2, –1, 0, 1, 2, 3, 4, . . .

Intercept: The distance from the origin of the *xy*-plane to the point at which the graph meets either the *x*-axis or *y*-axis (e.g., the *x*-intercept or *y*-intercept).

Intersecting lines: Two lines with exactly one point in common, the point of intersection.

Interval: A space between two points. For example, 0–10 represents the interval from 0 to 10 inclusively.

Irregular polygon: A polygon whose side and angle measures are not equal.

Isosceles triangle: A triangle that has two sides of equal length.

L

Line of symmetry: A line that divides a shape into two parts that can be matched by folding the shape in half.

M

Many-to-one correspondence: The matching of elements in two sets in such a way that more than one element in one set can be matched with one and only one element in another set, for example, 3 pennies to each pocket.

Mass: The measure of an object's weight.

Mean: The average; the sum of a set of numbers divided by the number of numbers in the set. For example, the average of 10 + 20 + 30 is 60 ÷ 3 = 20.

Measure of central tendency: A value that can represent a set of data, for example, mean, median, mode. Also called central measure.

Median: The middle number in a set of numbers, such that half the numbers in the set are less and half are greater when the numbers are arranged in order. For example, 14 is the median for the set of numbers 7, 9, 14, 21, 39. If there is an even number of numbers, the median is the mean of the two middle numbers. For example, 11 is the median of 5, 10, 12, and 28.

Mixed number: A number that is the sum of a whole number and a fraction, for example, 81/4.

Mode: The number that occurs most often in a set of data. For example, in a set of data with the values 3, 5, 6, 5, 6, 5, 4, 5, the mode is 5.

Multiple: The product of a given number and a whole number. For example, 4, 8, 12, . . . are multiples of 4.

Multiplication: An operation that combines numbers called factors to give one number called a product. For example, 4 x 5 = 20; thus factor x factor = product.

N

Net: A pattern that can be folded to make a three-dimensional figure.

O

Obtuse angle: An angle that measures more than 90˚; and less than 180˚.

Ordered pair: Two numbers in order, for example, (2, 6). On a coordinate plane, the first number is the horizontal coordinate of a point, and the second is the vertical coordinate of the point.

Order of operations: The rules used to simplify expressions. Often the acronym BEDMAS is used to describe this calculation process:

brackets

exponents

division or

multiplication, whichever comes first

addition or

subtraction, whichever comes first

Ordinal number: A number that shows relative position or place, for example, first, second, third, fourth.

P

Parallel lines: Lines that remain the same distance apart for their entire length and never intersect.

Parallelogram: A quadrilateral whose opposite sides are parallel.

Perfect square: The product of an integer multiplied by itself. For example, 9 = 3 x 3; thus 9 is a perfect square.

Perimeter: The distance around a figure.

Perpendicular lines: Two lines that intersect at a 90˚ angle.

Pictograph: See under graph.

Place value: The value given to the place in which a digit appears in a numeral. In the number 5473, 5 is in the thousands place, 4 is in the hundreds place, 7 is in the tens place, and 3 is in the ones place.

Plane shape: A two-dimensional figure.

Polygon: A closed figure formed by three or more line segments. Examples of polygons are triangles, quadrilaterals, pentagons, octagons.

Polyhedron: A three-dimensional object that has polygons as faces (plural: *polyhedra*).

Population: The total number of individuals or items.

Primary data: Information that is collected directly or first-hand. Data from a person-on-the-street survey are primary data. Also called first-hand data or primary-source data.

Prime number: A whole number greater than 1 that has only two factors, itself and 1. For example, 7 = 1 x 7.

Prism: A three-dimensional figure with two parallel and congruent bases. A prism is named by the shape of its bases, for example, rectangular prism, triangular prism.

Probability: A number that shows how likely it is that an event will happen.

Proper fraction: A fraction whose numerator is smaller than its denominator, for example, 2/3.

Pythagorean theorem: The conclusion that, in a right triangle, the square of the length of the longest side (hypotenuse) is equal to the sum of the squares of the other two sides.

Q

Quadrant: Any of the four parts of the Cartesian plane.

Quadrilateral: A polygon with four straight sides.

R

Radius: The distance from the outside of a circle to its centre.

Random sample: A sample in which all members of the population have an equal chance of being selected.

Range: The difference between the highest and lowest number in a group of numbers. For example, in a data set of 8, 32, 15, 10, the range is 24, that is, 32 – 8.

Rate: A comparison of two numbers with different units, such as kilometres and hours, for example, 100 km/h.

Ratio: A comparison of numbers with the same units, for example, 3:4 or 3/4.

Reflection: A transformation that turns a figure over an axis. The figure does not change size or shape, but it does change position and orientation. A reflection image is the result of a reflection. Also called flip.

Regular polygon: A closed figure in which all sides and angles are equal.

Rhombus: A parallelogram with four sides of equal length (plural: *rhombi*).

Right angle: An angle measuring 90˚.

Right angle: A triangle with one angle measuring 90˚.

Rotation: A transformation that turns a figure about a fixed point. The figure does not change size or shape, but it does change position and orientation. A rotation image is the result of a rotation. Also called turn.

S

Sample: A small, representative group chosen from a population and examined in order to make predictions about the population. Also called sampling.

Scalene triangle: A triangle with three sides of different lengths.

Scatter plot: A graph that attempts to show a relationship between two variables by means of points plotted on a coordinate grid. Also called scatter diagram.

Secondary data: Information that is not collected first-hand, for example, data from a government document or a database. Also called second-hand data or secondary-source data.

Scond-hand data: See secondary data.

SI: The international system of measurement units, for example, centimetre, kilogram. (From the French Système International.)

Similar figures: Geometric figures that have the same shape but not always the same size.

Slide: See translation.

Spreadsheet: See computer spreadsheet.

Slope: A measure of the steepness of a line, calculated as the ratio of the rise (vertical distance) to the run (horizontal distance).

Standard form: A way of writing a number in which each digit has a place value according to its position in relation to the other digits. For example, 7856 is in standard form.

Stem-and-leaf plot: An organization of data into categories based on place values.

Supplementary angles: Two angles whose sum is 180˚.

Surface area: The sum of the areas of the faces of a three-dimensional object.

Survey: A sampling of information, such as that made by asking people questions or interviewing them.

Symbol: A letter, numeral or mark that represents a number, operation or relationship.

Symmetry: An object or shape has symmetry if a line can divide it to make two congruent parts. Some objects and shapes have multiple lines of symmetry.

T

Table: An orderly arrangement of facts set out for easy reference, for example, an arrangement of numerical values in vertical or horizontal columns.

Table of values: A table used to record the values of two variables in a relation.

Tally chart: A chart that uses tally marks to count data and record frequencies.

Term: Each of the quantities constituting a ratio, a sum, or an algebraic expression.

Tessellation: A tiling pattern in which shapes are fitted together with no gaps or overlaps.

Theoretical probability: The number of favourable outcomes divided by the number of possible outcomes.

Tiling: The process of using repeated congruent shapes to cover a region completely.

Transformation: A change in a figure that results in a different position, orientation, or size. The transformations include the translation (slide), reflection (flip), rotation (turn), and dilatation (reduction or enlargement).

Translation: A transformation that moves a figure to a new position in the same plane. The figure does not change size, shape, or orientation; it only changes position. A translation image is the result of a translation. Also called slide.

Trapezoid: A quadrilateral with exactly one pair of parallel sides.

Tree diagram: A branching diagram that shows all possible combinations or outcomes.

Turn: See rotation.

V

Variable: A letter or symbol used to represent a number.

Vertex: The common endpoint of the two segments or lines of an angle.

Volume: The amount of space occupied by an object; measured in cubic units.

X

X-Y plane: A coordinate system based on the intersection of two straight lines called axes, which are usually perpendicular. The horizontal axis is the x-axis, and the vertical axis is the y-axis. The point of intersection of the axes is called the origin.

Self-Management
& Self-Direction

Ontario Literacy Coalition

THE LEVEL DESCRIPTIONS MANUAL

The Domain of Self-Management and Self-Direction

Outcome: Become a Self-Directed Learner

Introduction to a New Area of Assessment: Self-Management and Self-Direction

Self-management and self-direction skills are an important part of any learner-centred, goal-directed literacy program. Although skills in this domain may not be currently documented in literacy programs, they have always been addressed by practitioners and identified by learners as an important part of making progress toward learning goals. For example, it is a commonly held view that the ability to set realistic goals and maintain self-confidence is an important aspect of being successful in any learning program. This document is one step toward validating this domain as an integrated and integral part of literacy and numeracy learning in LBS-funded programs.

As the documentation of skills in this domain is relatively new, practitioners should view this section of The Level Descriptions Manual as a starting point in an ongoing process of developing, describing and documenting features and examples of self-management and self-direction learning outcomes in different types of programs over time.

General Overview

The skills in the domain of self-management and self-direction complement the other learning outcomes in the domains of communication and numeracy. The features of this domain contain the elements that surround and support learning. They are not intended as a curriculum or a list to be "covered" within a program. Rather, they are elements that may help or hinder a person's ability to work toward a learning goal. These elements, organized under features with supporting examples of possible performance indicators, surround and support learning and progress towards a learning goal and are an important part of the total learning plan.

Documenting "The Big Picture"

Features in this domain allow practitioners and learners to see "the big picture" of an individual's learning situation. They present various cognitive, affective, behavioural, environmental or individual elements that should be taken into account when developing a goal path, training plan, learning activity, or demonstration with a learner.

It is the individual learner's needs related to his/her skills and goals that will determine which features in this domain are relevant to that learner.

The Development of Features

This project began with an examination of the self-management and self-direction (SM/SD) outcomes listed in *Working with Learning Outcomes (1998).* The original SM/SD outcomes from the LBS learning outcomes document were analyzed for underlying skills, grouped into possible categories (features), and researched further.

Below is an example of how the criteria for this domain in *Working with Learning Outcomes (1998)* was developed into the features for this domain in The Level Descriptions Manual:

Working with Learning Outcomes (1998)	The Level Descriptions Manual
Criteria: • Improved/steady attendance • Assignments completed on prescribed or agreed upon time • Increased readiness to accept praise for own work • Increased readiness to take constructive criticism of own work • Increased readiness to offer constructive criticism of own work (Taken from page 141 of *Working with Learning Outcomes (1998)*)	These first two points in the list of criteria of the LBS document are examples of the feature: **Time Management/Organization Skills** The Level Descriptions Manual focuses on the FEATURE, allowing practitioners and learners to focus on the most relevant examples for this feature that relate to each learner. These three points are examples of the larger feature **Self-Assessment /Self-Reflection Skills.** There may be other or additional examples of skills within this feature that are relevant for a given learner. Not listed in the criteria list of the LBS document are other important features related to learning, such as skills of **Problem-Solving** and **Understanding of Personal Learning Style**. Difficulties in these areas may present barriers to learning.

In keeping with the nature of the original SM/SD outcomes from the LBS document, all the features developed in this project are skill-based, i.e., they are elements that can be learned and assessed. This project did not focus on life skills or personal attributes or any elements that are not directly linked to learning, assessment of learning, and progress toward a learning goal. The emphasis in this domain is on *self-assessment* and *self-identification* of skills that are important to learning.

Research for this Project

This project also started with learners' needs. The project team took into consideration recommendations made in the document "OLC Field Development Priorities for 2001–2002" about the need for more learner supports in programs, especially support for special needs. As well, OLC led a focus group with the OLC Learners' Council about what elements should be included in the SM/SD domain. Learners were asked to identify what helps or hinders learning and reported that the following elements were most important: *self-talk (positive feedback to yourself, encouraging yourself); anger management; stress relief; self-esteem; maintaining confidence; being less critical of yourself; feeling respected; building trust; being able to ask for help; and being able to speak up on behalf of someone else*. This information was taken into consideration in the development of features for this domain.

The project team also researched what other programs and projects had identified as important learning outcomes, features, and skills in this domain. The goal of the research was to scan relevant documents for adult learning outcomes identified under the heading "self-management" or "self-direction" as well as to focus on various "life skills" or transitional skill outcomes associated with adult education/literacy. Although it is acknowledged that SM/SD outcomes are not "life skills", many jurisdictions use the term "life skills" to describe many of the skills that surround and support adult learning. The team researched many different sources, searching for common elements. Out of a long process of analyzing, synthesizing and refining the skills lists, the team emerged with various versions of the SM/SD features lists for which feedback from the literacy field and a special advisory committee was given. This document lists the final version of this process.

The Issue of Levels and Summary Statements for the Learning Outcome: *Become a Self-Directed Learner*

Self-management and self-direction skills apply to all learners at all levels — to varying degrees, depending upon the individual and that individual's skills and goals.

Levels have not been used to describe progress in the self-management and self-direction domain. This is because this domain does not lend itself well to classification according to level. A learner may have extremely competent concentration/memory and thinking skills but need to work on self-confidence building skills. Rather than focusing on summary statements describing levels, it is more useful for this outcome to focus on relevant features

and meaningful performance indicators that directly relate to the learner's needs and goals.

It would be possible for a future project to focus on the development of rubrics *for each feature* to measure progress within that feature, but this was not within the scope of this project.

How This Section Can Be Used

This document presents suggestions and examples organized by feature to assist learners in developing and practitioners in documenting learning outcomes in the self-management and self-direction domain in adult literacy programs. The features and their accompanying examples of possible performance indicators can be used to bring attention to areas in which a learner's current skills are competent as well as areas in which a learner's current skills may present barriers to learning.

Existing Competence and Motivation

The features of *Become a Self-Directed Learner* can be used to identify and document existing skills and abilities. A learner may be at a basic reading and writing level, but may possess many skills within the self-management and self-direction domain. The learner might have acquired and practised these skills in day-to-day life at home or at work but may never have scrutinized or reflected on these areas as "skills". Recording and validating a learner's existing skills of self-management and self-direction can do a lot to boost confidence and help motivate the learner to establish and move towards further short-term learning goals. Documentation of such skills can also be added to a portfolio and assist with the development of long-term goals.

An assessment of existing self-management and self-direction skills can also be useful in programs that work with transient people or people with multiple challenges who are working on literacy but at such a rudimentary level that documenting goals and progress can be extremely difficult.

Documentation of features of the SM/SD domain can provide an effective starting point for including and integrating all learners in programs, no matter how rudimentary their skills. Assessing, developing and documenting self-management and self-direction skills can become a first — and crucial — step on the continuum of literacy learning.

Identifying Barriers to Learning

The self-management and self-direction features can also be used effectively to help a learner identify barriers to learning. For example, a learner may not be making progress in her reading program because of time management difficulties. As the learner progresses in her program, it may become clear that her difficulty in making it to her literacy group regularly and on time and completing assignments has served as a barrier to progress. The learner needs to identify this as a difficulty; only then can the learner and practitioner together look at the effect of time management skills on the learner's progress and what might be done to improve the situation.

It is most likely only through on-going assessment of the learner's progress that barriers to learning related to self-management and self-direction skills will be identified. At times, a literacy program may be unable to adequately meet the needs of the learner and she may require referral to outside supports. For example, as a learner progresses in her program, she may identify difficulty with anger management as an issue interfering with her participation in a group learning program. Working on this would be beyond the scope of any literacy program and would require referral to appropriate supports.

Integrating with Demonstrations

When a practitioner works with a learner to develop a training plan, demonstrations of learning are planned that will present an opportunity for a group of skills to be assessed in the context of a real life application. The features for *Become a Self-Directed Learner* presented in this document are examples of the kinds of features that can be integrated into demonstrations where applicable.

When developing demonstrations, practitioners should ask questions such as: Which SM/SD features are integral to the demonstration? Which features will help or hinder progress towards completing the demonstration? Which features need to be worked on to improve an individual's ability to learn or to progress towards a goal? Which features has the

learner identified as challenging areas when working toward a goal? The answers to these and similar questions should be discussed with the learners and recorded on the learner's training plan.

Programs will need to individualize their own content and formats for SM/SD outcomes and features to suit the nature of their programs and the learners with whom they work. Please see the example profiles at the end of this section for additional ideas about content and format for developing and presenting SM/SD features.

Become a Self-Directed Learner

Features and Example Performance Indicators

▶ The features and example **performance indicators** presented on the following pages are intended as samples of the kinds of self-management and self-direction skills that may affect learning and progress toward a goal.

▶ These features are **not** a definitive list or curriculum of skills that must be "covered" in any literacy program.

▶ These features are intended merely as suggestions of the kinds of skill areas that surround and support learning that may affect progress toward a goal.

▶ Programs should use this list as a starting point and add their own individualized features for each individual learner or group of learners.

▶ The features presented are based on the criteria listed in *Working with Learning Outcomes (1998)* under the self-management and self-direction domain as well as extensive research of other organizations and jurisdictions in Canada and elsewhere.

▶ The features represent areas that were highlighted by many organizations using various types of skill listings as areas that most likely affect learning and the learning environment. These areas were flagged as important to consider when developing an individualized training plan. Depending on the goals and skills of the individual learner, all or just some may be relevant.

▶ The examples presented with each feature are suggestions of how the features might be interpreted. Again, they are not definitive and are merely suggestions. Practitioners and learners should add their own relevant examples.

▶ Note that the features are presented in alphabetical order and are not ranked in any way.

Features of The Outcome:
Become a Self-Directed Learner

Features that surround and support learning that may affect progress towards a goal:

► concentration/memory skills

► goal-setting skills

► personal advocacy and self-motivation skills

► problem-solving skills

► self-assessment/self-reflection skills

► self-confidence building skills

► thinking skills

► time management/organization skills

► understanding of personal learning style

► working with others skills

Programs should add additional features relevant to learners at their agencies.

Feature	Example Performance Indicators
Concentration/ Memory Skills	• Develops and demonstrates ability to focus on one task at a time • Develops and demonstrates ability to persevere with a task until completion • Develops and uses strategies to increase memory • Develops and uses techniques to improve retention of information **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Goal-Setting Skills	• Sets long-term goals based on self-assessment of own skills, interests and abilities • Understands and uses strategies for breaking long-term goals into short-term goals that build toward the long-term goal • Develops and demonstrates an ability to understand the skills and knowledge needed to work on to achieve the short-term goal • Demonstrates an ability to evaluate his/her own progress toward short- and long-term goals **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Personal Advocacy and Self-Motivation Skills	• Demonstrates an ability to co-develop (with literacy staff) an individualized training plan based on his/her own learning needs • Participates in shaping his/her learning program and understands how learning activities relate to his/her goals • Reports a family member, friend, co-worker, or supervisor noticing an improvement in his/her skill • Shows increased readiness to take responsibility for own work **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Problem-Solving Skills	• Develops and demonstrates ability to identify problems and generate ideas about possible solutions/options • Uses a variety of approaches to deal with problems encountered in the learning environment • Develops and demonstrates techniques for breaking problems down into manageable parts • Develops and demonstrates ability to transfer problem-solving skills from one situation to another **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Self-Assessment and Self-Reflection Skills	• Shows increased readiness to accept praise for own work • Shows increased readiness to take constructive criticism of own work • Shows increased readiness to offer constructive criticism of own work • Can demonstrate an accurate understanding of his/her own learning strengths and weaknesses **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Self-Confidence Building Skills	• Reports greater confidence in his/her own skills • Demonstrates increased readiness to attempt to work independently • Demonstrates increased readiness to try new learning challenges and assignments • Reports a successful application of newly-acquired skills in a real-life context **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Thinking Skills	• Develops and demonstrates reasoning and logic skills through practice • Demonstrates that he/she can transfer knowledge from previous learning to complete a new task • Develops and demonstrates ability to clearly explain and convey ideas • Develops and uses a variety of learning approaches/activities (e.g., outlining, reviewing, organizing, etc.) to deal with new information **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Time Management and Organization Skills	• Shows improved/steady attendance • Shows that assignments are completed at prescribed or agreed upon time • Completes sequential tasks in order, finishing one task before beginning subsequent tasks • Plans several activities in advance for a day/month/year **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Understanding Personal Learning Style	• Understands and can explain the basic idea of different learning styles • Understands and can explain his/her own preferred learning style • Develops and uses strategies to deal with learning material that is not presented in his/her own learning style • Develops and uses strategies to deal with different types of learning materials **Practitioners and learners should create other relevant examples**

Feature	Example Performance Indicators
Working with Others	• Develops and uses strategies for dealing with interpersonal conflict in the learning environment • Develops and demonstrates an ability to work as part of a team • Demonstrates increased participation in the program (e.g., in class, on committees, joining field trips, etc.) • Shows increased readiness to offer constructive criticism of others' work, if asked **Practitioners and learners should create other relevant examples**

Self-Management and Self-Direction Skills: Example Profiles

Two Example Profiles

Two example profiles are presented on the following pages. These examples present profiles of learners to show how the skills within the self-management and self-direction domain can be integrated into a learner's training plan.

There is no definitive way to document these skills on a training plan. The following examples, along with other material presented in this document, show a few of the many ways that these skills can be incorporated into training plans.

There are two examples: one uses a narrative training plan format. The other example uses a chart format.

Initial Assessment and Training Plan Development

Learner background information

Joe

- 58 years old, retired factory worker

- will work with a volunteer tutor (Ed) in a one-to-one community-based literacy program

- using the program's assessment tools, Joe has been assessed at level 2 — writing,
level 4 — reading

General Assessment: Goals

On August 2, 2000, program staff (David), Joe's tutor (Ed), and Joe discussed Joe's goals.

- Joe said he would like to improve his writing skills to be able to communicate using letters or e-mail with his family and friends.

- He said his long-term goal is to be able to write letters and other longer pieces of writing to family and friends and eventually to be able to correspond in writing with anyone.

- Joe's short-term goal is to be able to write e-mail messages to friends.

Goals and Training Plan Development

On August 2, 2000, program staff (David) and Joe's tutor (Ed) worked with Joe to develop a training plan.

- Joe said he wanted to work on writing mechanics, such as grammar, spelling, and punctuation. This was articulated in the Communication Skills section of his training plan.

- Joe also expressed discomfort with and a lack of confidence in his writing skills. He said that he had tried working on his writing skills in the past but that he found it hard to concentrate and often lost interest. Joe said that he thought if he learned to be more organized that it might make him feel more confident. He said that he had trouble seeing his strengths in writing and that it might help to work on this.

- Together with David, Joe identified self-management and self-direction skills that impact his ability to communicate in writing with his friends and family.

- His course of study for six months will be to improve writing and increase organization, memory and self-confidence about using writing in his daily life.

- Joe agreed to the following elements on his training plan:

Communication skill areas to work on:

- Write simple sentences to express thoughts, describe experiences, and give personal information; work toward writing a short paragraph

- Use basic organizers such as common linking words, titles, basic parts of a letter, a sentence, and a short paragraph

- Use basic punctuation, basic phonics to spell unfamiliar words, and basic grammar

Self-management and Self-direction skills to work on:

Time Management/Organization Skills

- Joe says he needs to be able to organize tasks in terms of priority. He says he would like to find the time to write letters but has trouble doing this.

- Joe has decided to work on organizing time by having his tutor model this as part of the tutoring session.

- The sessions will be organized according to activity with a time limit for each.

- At first, this will be organized and monitored by the tutor. Eventually, Joe will assume responsibility for planning the lessons and determining how much time is appropriate for each task that will be accomplished in each session.

- Program staff have assessed that Joe did use time management and organization skills in his former job and in carrying out duties at home. Joe will be encouraged to build on these prior skills within the current learning context.

Concentration/Memory Skills

- Joe says he needs help in learning how to focus and remember what he has learned.

- On the advice of program staff, techniques such as mnemonic devices, and visual memory cues will be developed by the tutor with Joe.

- These techniques will be recorded and tried out. Their success or failure will be documented by the tutor and by literacy program staff and assessed by Joe as to whether they are working for him or not.

Self-Confidence Building Skills

- Joe says he does not answer e-mails or correspondence because he is embarrassed by his writing.

- He agreed that he will build self-confidence by practicing writing and then sending some of his writing to his tutor using the e-mail program at the literacy program.

- Joe agreed to start with small one-sentence statements and build up to complete written paragraphs.

- When Joe and his tutor assess that Joe is beginning to have success with this learning activity, Joe agreed to begin to send e-mails to staff at the literacy program as well as to his tutor.

- Joe agreed that eventually he will select one trusted friend (Dan) and practice sending e-mails back and forth to his friend.

- Joe agreed that he will incrementally build up his self-confidence in his writing ability by gradually increasing the number of people he corresponds with. After Dan, Joe will begin e-mailing his brother (Doug) and his former co-worker (Mario). The same process of assessment will be used as Joe expands his network of correspondence to improve both in his writing but also his self-confidence in using writing.

Demonstration to work towards

- Joe agreed that he will demonstrate improvement in all the skill areas above by composing one written letter of two paragraphs with no spelling or grammar errors and will e-mail the letter to a friend (Dan) and use the friend's reply to gauge whether the letter was comprehensible.

- Note that Joe and his friend, Dan, have given written permission to carry out this demonstration.

Time frame for demonstration

Training plan agreement approved by Joe, program staff (David) and Joe's tutor (Ed) on August 2, 2000

- After six months of working for 2 hours a week with his tutor, Joe will attempt the demonstration.

- A new set of short-term goals and a new demonstration will be created at a training plan review with Joe, Joe's tutor and literacy program staff at the end of the six-month period.

- A new demonstration may include writing a letter for the literacy program newsletter and eventually writing a letter to the editor of the local newspaper. Another may include writing more formal correspondence with his network of family/friends (Doug, Mario). This will be determined with Joe and his tutor at the six month review.

• Profile Example 2 •

Please refer to large table opposite.

Background	Goal
Lisa completed grade 9 in Calgary. She worked in the housekeeping department at St. Leo's hospital from June 1995 until January 2000. She is currently unemployed. Lisa speaks very well but is shy and soft-spoken. Her one-on-one conversational skills are good with familiar people. She is uncomfortable speaking with new people and in a group. [Entry: LBS Level 2-3] Based on her initial assessment, Lisa will commence working in a beginning level literacy workbook with a one on one tutor and in the Computer Literacy Program. [Entry: LBS Level 1-2] Lisa would like to work on: • Meanings of words • Understanding in reading • Remembering what she reads • Telling about what she has read • Spelling • Knowing what to say when she is writing • Knowing how to write correctly When learning new things Lisa likes to: • be shown how to do it • learn by doing it When making a decision Lisa: • goes with a gut feeling, or • uses logic to figure it out When learning Lisa prefers to have something new and different in each lesson.	**LONG TERM:** • To work as a health care aide • To be able to write the GED or obtain grade 12 credit **SHORT TERM:** • To improve her speaking, reading and writing skills to help her get another job *[6 months – 1 year]* • To improve comprehension when she reads • To help her children with their homework • To be able to read information (notes, newsletters, etc…) brought home from school by her children **Training Dates:** Matched May 3, 2000 Meet with a tutor one on one once per week for two hours. Computer Literacy Program: two hour session once per week **Training Supports:** • OW will provide funding for books and other necessary materials as needed. **Updates/Reviews:**

Plan

ENTRY LEVELS Learner's present skills	LITERACY AND BASIC SKILLS PROGRAM Skills learner must develop	GOAL REQUIREMENTS Skills learner needs to know
Self-Management and Self-Direction Lisa has demonstrated excellent time management and organizational skills since entering the program. *Concentration/Memory Skills:* Lisa is easily distracted from a learning situation. In her previous workplace Lisa worked independently in a quiet environment. She feels that her lack of a concentration may be a problem in a different type of work environment in the future. *Goal Setting:* Lisa has been able to successfully determine what her long and short-term goals are. When Lisa entered the program her long-term goal was to become a nurse. She has now decided that will take too long. However, she wants to work in a related field. She now thinks that she would like to be a home care worker.	**Self-Management and Self-Direction** Lisa should continue to demonstrate her time management and organizational skills that are crucial to her success in reaching her goals in a timely manner. *Concentration/Memory Skills:* Lisa needs to work on her concentration skills. She is aware of her tendency to become distracted and welcomes being reminded. A verbal reminder that she has become distracted with a prompt to return to the task at hand can be used to help Lisa could try taking regular breaks to avoid fatigue and loss of concentration. She should be able to determine the necessity for a break and return to the task at hand within a reasonable amount of time. **Demonstrations:** • Indentifies and avoids (where possible) potentially distracting environments (e.g. may choose to work in a quieter corner of the library) • Focuses on the work at hand despite being situated in a "traditionally" distracting environment (e.g., room with other learner/tutor pairs present). • Note: All of the above should be demonstrated enough times that both Lisa and the tutor feel she has improved her concentration skills in a learning situation. *Goal Setting:* Lisa should research the requirements necessary to become a home care worker and determine whether or not this will fit into her her long-term plans. Lisa should revisit her long and short-term goals on a regualr basics (monthly) in order to: • Self-evaluate progress towards goals • Revise goals in light of feedback/progress	**Self-Management and Self-Direction** Client should have the skills to be capable of achieving the best results possible in her personal life and later on in an employment situation. *Ongoing* Client should concentrate and complete tasks within necessary time frames at work and at in the community. *Ongoing* *Goal Setting:* Client should be able to set and meet goals within a reasonable time frame.

Resources

Ontario Literacy Coalition

THE LEVEL DESCRIPTIONS MANUAL

Resources

Print Resources

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http://www.eoa-hrdc.com

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National Institute for Literacy. Equipped for the Future—Work Readiness.
http://www.nif.gov/nifl-workplace/1996

Northwest Regional Educational Laboratory. Developing Employability Skills
http://www.nwrel.org

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http://www.servtech.com/-germaine/rubric.html

Teacher Resources. Higher Order Thinking Skills.
http://www.covington.k12.tn.us/resources/word/hots2.htm