

Ontario Skills Passport Resource Backgrounder

<http://skills.edu.gov.on.ca>

Name of resource	Linking the Ontario Skills Passport (OSP) to Ontario's Math Curriculum, Intermediate Division, Grade 9
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Date resource was produced	January 2006
Original language submitted	<input type="checkbox"/> English <input checked="" type="checkbox"/> French
Computer use required when using this resource?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Software or Web pages required: <ul style="list-style-type: none"> • Ontario Skills Passport - http://skills.edu.gov.on.ca • Ontario Job Futures – www.ontariojobfutures.ca • Canada Job Futures - www.jobfutures.ca
Font used in handouts	Arial 9
Background information <u>and</u> a brief description of the process used to pilot and evaluate the resource.	This resource helps teachers of Grade 9 mathematics to make the connection between the concepts studied in class and the development of essential numeracy skills and their use in daily life. This resource includes: <ul style="list-style-type: none"> - OSP Resource Backgrounder - Key Messages to Consider in Using an OSP Resource - Appendices 1, 2 and 3 - Model Wall Chart - Activity A and Activity B - Achievement Chart
Purpose of Lesson	Make the connection between learning mathematics and acquiring essential skills and their application in everyday life.
Recommended target group (e.g., grade levels student ages, newcomers, unemployed youth, etc.)	Any Grade 9 student who is completing a math course.
Teacher/trainer notes	Prior to the lesson, please familiarize yourself with the following: <ol style="list-style-type: none"> 1. Go to the OSP website at http://skills.edu.gov.on.ca. Click on FAQs located in the black and white navigation bar at the top of the page. 2. Read and become familiar with the information contained in the first 5 sections: <ul style="list-style-type: none"> • Introduction • Research on Essential Skills • OSP Skills • OSP Work Habits

- The OSP Database
3. Familiarize yourself with:
 - **Appendix 1:** "What is a NOC code?"
 - **Appendix 2:** "Which occupations are included in the OSP database?" (for teachers)
 - **Appendix 3:** "OSP Work Skills" and "OSP Work Habits" (for students and teachers)
 - "Key Messages to Consider in Using an OSP Resource".
 4. Familiarize yourself with **Activities A and B** and the **Achievement Chart**.
 5. Familiarize yourself with the Ontario Job Futures website (www.ontariojobfutures.ca) and/or the Canada Job Futures website (www.jobfutures.ca) to facilitate the research done by students in Section 5 of the lesson plan (optional).

PLANNING NOTES

1. Order copies of the **OSP Brochure**. Go to the OSP website at <http://skills.edu.gov.on.ca>. Click on "**Links**" located in the navigation bar at the top of the page and click on the "**Order Form**" button.
2. Print out sample tasks for the 10 occupations listed below.
 - Go to the OSP website and click on "**Occupations and Tasks in the OSP Database**" located in the navigation bar at the top of the page.
 - Click on "**Sorted by NOC code**" and then click on the "**Next**" button.
 - Scroll through the list and find the first occupation (**O632b – Campground Operators**).
 - Click on the "**Sample Workplace Tasks**" button located beside the occupation.
 - Click on "**Print**" and you will get a list of sample tasks, organized by skill and skill level, a description and a list of "most important essential skills" for the occupation.
 - NOC 0632b Campground Operators
 - NOC 6242 Cooks
 - NOC 7241 Construction Electricians
 - NOC 0621b Tour Operators
 - NOC 6441a Local Tour Guides
 - NOC 9443 Textile Dyeing and Finishing Machine Operators
 - NOC 3234 Paramedics
 - NOC 1432 Payroll Clerks
 - NOC 9498a Signmakers
 - NOC 1451 Library Clerks
3. Prepare 10 large flip-chart sheets headed with the names of the occupations; divide each sheet into sections for filling in the 14 essential skills.

Note: A "Model Wall Chart" has been included with this resource. If flip chart paper is not readily available, you could adapt the activity by copying a model wall chart for each student.

4. Make copies of the appendices, activities and achievement chart for students.
5. Reserve computers for one period to allow the students to explore and use the OSP during Section 4 of the lesson plan.

LESSON PLAN

Section 1: Simulation exercise - written brainstorming in rotation

1. Ask students to stand in teams of two in front of one of the 10 sheets. Tell them that they will rotate every 30 seconds from one sheet to another. Point out that there are 14 categories.

Note: A "Model Wall Chart" has been included with this resource. If flip chart paper is not readily available, you could adapt the activity by copying a model wall chart for each student.

2. Ask students to write how they think a person in the occupation uses 1 (or 2) categories in daily workplace tasks.
3. Continue in this way to the end of the rotation (each team has written on the 10 sheets).
4. Do a final rotation – free choice of any sheet in order to complete or add to the categories.
5. Ask each team to stand in front of a sheet and present the information on their sheet.
6. Explain that the headings of these 14 categories are essential skills. You may want to write the following definition of essential skills on the board:

*Essential skills are used in nearly all occupations and throughout daily life. They are **transferable** from school, home and community to work.*

7. Hand out **Appendix 3** to discuss essential skills and work habits.
8. Elicit the names of the **5 numeracy-related skills** (Money math, scheduling or budgeting and accounting, Measurement and calculation, data analysis and numerical estimation).
9. Elicit examples of how students use their essential skills and work habits in their daily tasks at home, in school or in the community.

Section 2: Focusing on How Workers Use Numeracy-Related Skills

1. Write the titles of the following two occupations on the board:
(a) Campground Operator and (b) Cook.
2. Ask the students: "If you had to choose out of the whole list of 14 essential skills, which ones do you think are the **most important essential skills** for each of these two occupations?" (Note:

Students can refer to Appendix 3 for list of skills).

3. Compare the students' list with the list generated from the OSP website. Ask the following:

"What is the difference between your choices and what workers indicated were the most important skills for these occupations?"

Answers:

Campground Operators - Writing, Money math, Scheduling or budgeting and accounting, Measurement and calculation, Data analysis, Numerical estimation and Oral communication

Note: Campground Operators include all 5 numeracy-related skills in their list of most important essential skills!

Cooks - Oral communication, job task planning and problem solving.

4. Indicate that even if the numeracy-related skills are not identified as being the "most important" for a particular occupation, they are still essential. Cooks need to accurately measure ingredients and convert between the metric and Imperial systems!
5. In pairs or as a class, generate a sample task for each of the essential numeracy-related skills. Compare to the list of sample tasks in the OSP.
6. Point out that everyone uses the five essential numeracy-related skills in their daily tasks, whatever their occupation.
7. Time permitting, review the other 8 occupations and highlight how workers in these occupations use the 5 essential numeracy-related skills.
8. Elicit examples of how students use their essential skills and work habits in their daily tasks at home, in school or in the community.

SECTION 3: Making the connections!

1. Explain that the concepts studied in the Grade 9 mathematics course are closely related to the development of essential numeracy-related skills. These skills are used every day in many aspects of our lives and in all occupations.
2. Assign **Activity A** to half of the class and **Activity B** to the other half of the class.

Option for Activity B:
Teachers who wish to offer an additional activity could give students the cost of fencing and sod and then ask them to calculate the total cost.
3. Allow the students from both groups to present the results of their activity and explain the connection with development of essential numeracy-related skills.

SECTION 4: Using the OSP

1. Ask students to identify other mathematical concepts that are studied in Grade 9 (e.g., relationships, percentages, rates, problem solving, data analysis) and to give examples of occupations that apply these concepts in their work.
2. Ask students to work with a partner and to **choose 3 mathematical concepts** for which they will be asked to select an occupation and complete research on the OSP website.
3. Using the **OSP Brochure**, present the OSP to the students, explaining its purpose and benefits.
4. Review the documents they read/used for the activity in Section 2 of the lesson (i.e. list of sample tasks for cooks, campground operators, etc).
5. Hand out an assessment chart for the research work on the OSP.
6. Guide the exploration of the OSP website to create a work plan for the occupation they will be selecting, proceeding as follows:
 - a) OSP website address - <http://skills.edu.gov.on.ca>
 - b) Click on "English".
 - c) Click on "**Occupations and Tasks in the OSP Database**".
 - d) Choose "**sorted by NOC code**"
 - e) Choose an occupation/trade in which you think you will find the 3 mathematical concepts selected will be used (for example, "parts clerk") and read the description to check if it seems to have a connection with the concept and numeracy-related skills for this occupation.
 - f) Click on the "**Sample Workplace Tasks**" to view sample tasks for this occupation.
 - g) Read through sample numeracy tasks to determine if they have a connection with the mathematical concepts you have chosen.
 - h) Once you have found an appropriate occupation, click on the "**Print Occupational Profile**" button.
7. Ask each team to
 - present the occupation they researched
 - the mathematical concepts they chose; and
 - explain how essential numeracy skills are used to carry out daily tasks. (assessment)

Section 5: Job Futures (optional)

1. Ask students to search on the Ontario Job Futures website (www.ontariojobfutures.ca) and/or Canada Job Futures website (www.jobfutures.ca) website to determine the work prospects for the occupation they researched in Section 4.
2. Ask students to print the information on prospects for the coming years for the occupation, and to analyse and interpret the situation presented by the graphic figures they found.

Estimated time required for effective use of resource	3 periods of 75 minutes	
Connections to the Ontario curriculum and/or training materials/programs	<p>MPM1D, Principles of Mathematics, Grade 9 MFM1P, Foundations of Mathematics, Grade 9</p> <p>The activities in this resource will help students demonstrate their skills in the following areas:</p> <p>Relevant curriculum connections from MPM1D: LR2.01: construct tables of values, graphs, and equations, using a variety of tools (e.g., graphing calculators, spreadsheets, graphing software, paper and pencil), to represent linear relations derived from descriptions of realistic situations</p> <p>MG2.03: solve problems involving the areas and perimeters of composite two-dimensional shapes (i.e., combinations of rectangles, triangles, parallelograms, trapezoids, and circles)</p> <p>Relevant curriculum connections from MPM1P: L2R.01: construct tables of values and graphs, using a variety of tools (e.g., graphing calculators, spreadsheets, graphing software, paper and pencil), to represent linear relations derived from descriptions of realistic situations</p> <p>MG2.03: solve problems involving the areas and perimeters of composite two-dimensional shapes (i.e., combinations of rectangles, triangles, parallelograms, trapezoids, and circles)</p>	
Information on Essential Skills Research (ESR) and the OSP that is relevant to the resource (see the attached key messages about ESR and OSP)	Familiarize yourself "Key Messages to Consider in Using an OSP Resource".	
Relevant references and/or links to the Ontario Skills Passport website (and if appropriate, to the Human Resources and Skills Development Canada (HRSDC) Essential Skills Research website).	<p>Familiarize yourself with the pamphlet obtained from HRSDC: "Essential Skills – Skills to Build On" - (Pamphlet no. HIP-006-07-04)</p> <p>Essential Skills Research - http://srv600.hrdc-drhc.gc.ca/esrp/english/general/home_e.shtml</p>	
Also included: (please check all that apply)	<input type="checkbox"/> sample Authentic Workplace resources <input checked="" type="checkbox"/> sample OSP Work Plans to complement the resource where appropriate <input checked="" type="checkbox"/> assessment and evaluation methods where appropriate <input checked="" type="checkbox"/> glossary of terms, if appropriate <input checked="" type="checkbox"/> links to other resources and/or initiatives, bibliography	
OSP skills and work habits that are highlighted in this resource: (please check all that apply)	<u>OSP Skills</u> <input type="checkbox"/> Reading <input type="checkbox"/> Use of documents <input type="checkbox"/> Writing	<u>OSP Work Habits</u> <input type="checkbox"/> Working safely <input type="checkbox"/> Teamwork <input type="checkbox"/> Reliability When reading the OSP Work Plans (simulation exercise and Step 1), all skills

	<input checked="" type="checkbox"/> Numerical estimation <input checked="" type="checkbox"/> Money math <input checked="" type="checkbox"/> Measurement and calculation <input checked="" type="checkbox"/> Scheduling or budgeting and accounting <input checked="" type="checkbox"/> Data analysis <input type="checkbox"/> Oral communication <input type="checkbox"/> Decision making <input checked="" type="checkbox"/> Problem solving <input type="checkbox"/> Job task planning <input type="checkbox"/> Use of computers <input type="checkbox"/> Finding information	<input type="checkbox"/> Initiative <input type="checkbox"/> Customer service <input type="checkbox"/> Entrepreneurship	and work habits are presented. The numeracy skills are evident throughout the activity.
Type of software used in creation of resource	Microsoft Word		
Other important information	This resource is useful for teachers of Grade 9 mathematics but can easily be adapted to any other material taught. It clarifies the connection between the concepts studied in class and the development of essential skills and their application in daily life. The resource provides a way of exploring and using the OSP Web site and other essential ideas for exploring careers such as the NOC, related sites (Essential Skills, Job Futures).		
Permission has been obtained to reproduce and adapt this resource for educational purposes only.			