

Terminology Portfolio

Activity Summary

- In this activity, students will:
- ♦ Create a portfolio of scientific terminology and tasks
 - ♦ Create a mind-map of one **Essential Skill** and related tasks and sources from this course
 - ♦ Career activities (extension/optional)



Prior Knowledge

- Definition of nouns and verbs
- How to create a mind-map
- **Essential Skills** including the six sub-categories for Thinking Skills



Teaching Planning Notes

- Review assignment including prior knowledge required and assessment and evaluation tools
- Provide initial examples for all students to copy into their portfolios
- Provide students with a file folder or duo-tang for activity which stays in the classroom
- Provide students with tools for mind-maps (11" x 17" paper, markers, magazines)
- Provide students with examples of mind-maps (mind-mapping websites)
- Extension Activity in Career Exploration (see attached)

Assessment of Student Achievement

Task	Tool / Type
Terminology Portfolio	Dissecting Essential Skills Assessment Tool (Formative)
Mind-Map	Dissecting Essential Skills Mind-Map Rubric (Summative)

Activities and Assessment Materials

- Terminology Portfolio Assignment
- Terminology Portfolio Worksheet 1: Terminology
- Terminology Portfolio Worksheet 2: Tasks
- Terminology Portfolio Assessment Tool
- Mind-Map Assignment
- Mind-Map Rubric

FOCUS ON LEARNING

Essential Skills:

Reading Text

Terminology Portfolio

Writing

*Terminology Portfolio
Mind-map*

Thinking Skills

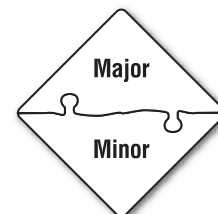
Terminology Portfolio

Working with Others

Mind-map Peer Review

Document Use

Worksheet



Curriculum Linkages For Ontario Educators

Essential Skills truly are everywhere and as teachers we are always teaching students the **Essential Skills!** As subject teachers and specialists, we know that many of the curriculum expectations we are accountable to teach and assess, also address the **Essential Skills** and while the linkages are not always readily apparent, the linkages exist nonetheless.

While this activity connects to a variety of courses it is most closely aligned to the following course(s):

- Locally Developed Compulsory Credit Course, Science – Grade 9 - SNC 1L
- Science – SNC 1P

To assist you, the teacher, in making more transparent linkages, we have identified the following curriculum linkages for this activity.

Locally Developed Compulsory Credit Course, Science – SNC 1L

Coded Overall Expectations	Coded Specific Expectations
CPMV.01 – explain the characteristics and classification of common materials using appropriate scientific terminology	
BSAV.01 – explain the systems and processes required by simple and complex organisms to sustain life	BSA1.01 – describe the basic life-sustaining processes of organisms, including single celled and complex organisms (e.g., ingestion of food, waste removal, gas exchange, material transport, response to environmental stimuli, reproduction) using appropriate scientific vocabulary
PECV.01 – describe the characteristics of electrical circuits	PEC1.01 – use scientific terminology during investigations to describe basic electrical components and related units of measure
SILV.03 – examine the connections between science and activities in daily life.	

Science – SNC 1P

Coded Overall Expectations	Coded Specific Expectations
BYV.01 – demonstrate an understanding of the processes of cell division, including mitosis, and the function of sexual (including human) and asexual reproductive systems	BY2.07 – communicate scientific ideas, procedures, results, and conclusions using appropriate language and formats
CHV.01 – describe the atomic structure of common elements and their organization in the periodic table	CH2.07 – communicate scientific ideas, procedures, results, and conclusions using appropriate language and formats (e.g., present data on different chemical substances in a table using appropriate headings such as compound, element, chemical property, physical property)
ESV.01 – demonstrate an understanding of the formation, evolution, structure, and nature of our solar system and of the universe	ES2.06 – communicate scientific ideas, procedures, results, and conclusions using appropriate SI units, language, and formats (e.g., prepare a comparative data table on various stars)
PHV.01 – demonstrate an understanding of the principles of static and current electricity	PH2.07 – communicate scientific ideas, procedures, results, and conclusions using appropriate SI units, language, and formats (e.g., electrical power, voltage, resistance; drawings, charts, graphs)

Dissecting Essential Skills

In this course you will be introduced to many new terms – some specific to science and some related to tasks in the workplace. This assignment requires you to create a portfolio of scientific terms and tasks related to this course. You will be adding new terms regularly as we progress through the textbook. Towards the end of the course, your portfolio will be complete. In addition to your portfolio you will be creating a mind-map based on your completed portfolio.



Divide your portfolio into two sections:

Section 1: Terminology

Section 2: Tasks

Section 1: Terminology

In Section 1 you will be adding terminology, its definition and an example of how it is used in a sentence. See sample below.

Section 1: Terminology

WORD	DEFINITION	SENTENCE USED IN
Density	The degree to which something is filled or occupied	“Interpret class data on liquid densities”

Section 2: Tasks

In Section 2 you will be adding words specific to tasks or actions associated with science in this course. Examples of tasks will come from your text, in-class activities and other assignments in this course. With the word, you will include the source (where you found your definition), and the **Essential Skill** you believe is most closely associated with the task. See sample below.

Section 2: Tasks

WORD	SOURCE	DEFINITION	ASSOCIATED Essential Skill(s)
Analyze	Lab 1: Title	Examine methodically	Thinking Skills: Critical Thinking

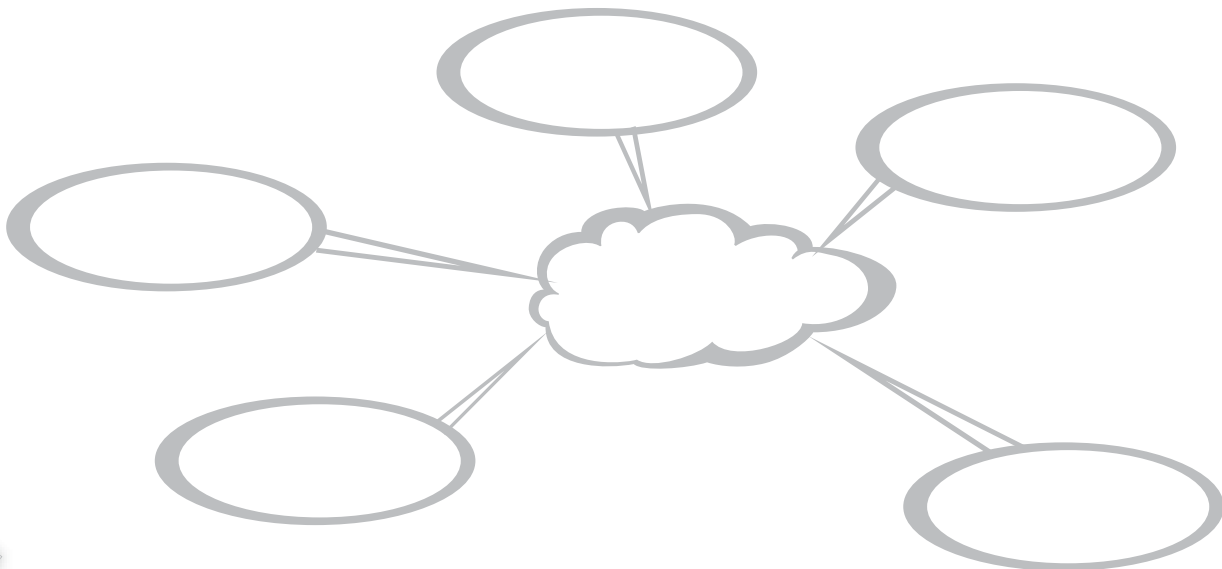
Dissecting Essential Skills Mind-Map Assignment

Once your portfolio is complete, review its contents and select one **Essential Skill** to use as the basis for your mind-map. Based on that one **Essential Skill**, create a mind-map that shows all the tasks you identified that are related to that **Essential Skill**. In addition, link these tasks to specific activities that we completed in class throughout the year. Use of pictures and colour coding is strongly suggested.

Steps to Successfully Completing Your Mind-Map

1. Review your portfolio for **Essential Skills**, tasks and source of information
2. Choose one **Essential Skill** for your mind-map
3. Find and highlight all tasks associated with that skill in your portfolio
4. Find and highlight all sources of information
5. Group your findings either by task or source of information
6. Begin a rough draft of your mind-map based on steps 1 - 5
7. Have a peer review your mind-map and provide suggestions for improvement
8. Begin your final mind-map in pencil
9. Review for minor changes (see mind-map rubric)
10. Complete mind-map using markers and other tools. (magazine pictures, computer generated pictures, etc.)

Sample Rough Draft



Dissecting Essential Skills Extension Activities To Mind-Map



If there is a careers section in this science course, the following activities could be used to enhance the mind-map assignment. Students are asked to choose a career in science (as per your course). Based on that they could do any or all of the following:

- Summarize how the **Essential Skills** from their mind-map are related to this occupation
- Review another student's mind-map with a different **Essential Skill** and write a summary of how the **Essential Skill** from their peer's mind-map is significant to their occupational choice as well.
- Act out tasks in small groups and have others identify the task and the related **Essential Skill**
- Explore HRSDC's website and review a career in science

Dissecting Essential Skills Assessment Tool

Student Name _____

	(ACHIEVEMENT LEVEL 1 = LOWEST, 5 = HIGHEST)				
Completeness All required terms and tasks	1	2	3	4	5
Clarity Easy to read, good layout, in logical order	1	2	3	4	5
Correctness Spelling and Grammar	1	2	3	4	5

Comments _____

Note to Teacher: The number of submissions for terminology and tasks should be identified at the beginning of this assignment.

Dissecting Essential Skills Mind-Map Rubric

Student Name _____

CATEGORIES/ CRITERIA	LEVEL 1 (50-59%)	LEVEL 2 (60-69%)	LEVEL 3 (70-79%)	LEVEL 4 (80-100%)
Knowledge and Understanding Demonstrates an understanding of scientific terminology	Limited	Somewhat	Considerable	To a High Degree
Thinking and Inquiry Effectively analyzes the connections between science tasks and daily life (<i>Essential Skills</i>)	Limited Effectiveness	Some Effectiveness	Considerable Effectiveness	To a High Degree of Effectiveness
Communication Effectively communicates scientific ideas and procedures	Limited	Somewhat	Considerable	To a High Degree

Note: A student whose achievement is below Level 1 (50%) has not met the expectations for this assignment or activity.

