

*Portage la Prairie  
School Division*



*Dedicated to The Pursuit of Excellence*

**Differentiated  
Instruction Strategies  
for  
Teaching & Learning**

The *Success For All Committee*, established during the 1996-97 school year, outlined a three-year plan for the implementation of the strategies from the *Success For All Learners* document. The committee's primary goal was to promote the use of differentiated instructional strategies in the division's classrooms. The consistent use of these strategies in all schools and from grade to grade was seen as the best way to enhance the learning of all students within the division. In order to achieve the primary goal, a secondary goal of the committee was to develop a division-wide continuum of best instructional strategies. This continuum would be used as a guideline so that teachers from school to school and from grade to grade would know what to expect from the students entering their classrooms.

This brochure is the final result of the process to develop the continuum.

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NOTE: The strategies described in this brochure should serve as a guideline for the teachers at each grade level but are not meant to limit each teacher. The strategies may be adapted to each teacher's need and grade level. Also, there are many other excellent strategies described in various curricula guides that may be used or adapted by teachers.

## Active Listening

### Check Five

This activity teaches whole-body listening.

### *Purpose:*

To teach students the physical skills associated with active listening.

### *Steps:*

1. The class identifies what five parts of the body do during active listening: hands, feet, eyes, ears, and brain.
2. Students work in pairs, with one child in each pair designated the listener and one the speaker. The listener wears a hat.
3. The speaker says, "I need you to check five." The listener checks hands, feet, eyes, ears, and brain to see that they are prepared to listen.
4. The speaker talks freely or on a given topic until a timer rings.
5. The listener repeats what the speaker said "I heard you say ...."
6. The speaker confirms the summary.
7. The partners reverse roles.

**SLANT** is an acronym used to help students learn the physical behaviours associated with active listening:

### **SLANT**

- Sit up
- Learn
- Activate your mind
- Note what the speaker is saying
- Track the speaker with your eyes

The **SWIM** strategy provides two-stage instructions for active listening. Teachers need to demonstrate these skills first, and then have students practise them with a partner.

### **SWIM**

- Sit up
- Watch the speaker
- Inquire
  - ask yourself what the speaker is saying
  - ask a relevant question
- Make connections with what you already know
  - Make a picture in your mind

**K**

**LISTEN** – to instructions, a lecture, video, presentation, or discussion

**THINK** – individually and make a list, a map, or a diagram

**PAIR** – with a partner, add to the ideas generated individually

**SHARE** – responses with the whole group

### Sort and Predict Frame

Unit \_\_\_\_\_

Topic \_\_\_\_\_

**Directions:**

Read the list of words on the left and sort them into four different categories by placing them in the boxes. For the words that you are unsure of, predict which category each would belong to. When selecting categories, try to make the fourth category different from any category that the rest of the class would think of. Use your creativity; be original! You may use one word in more than one category.

	1. _____
	2. _____
	3. _____
	4. _____

<b>KWL</b>	
Know now (draw:)	Know now (list):
Need to know:	
List what you have learned:	Final concept map or drawing:

1 K  
&  
1

### Gallery Walk

A Gallery Walk can also be used at the beginning of a unit to introduce students to the subject. It is an effective way to offer students tactile and visual experiences.

***Purposes:***

1. To present the big picture.
2. To integrate the ideas in a unit.
3. To extend students' ideas.

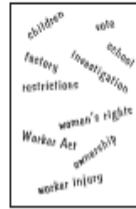
***Steps:***

1. The teacher places several displays, pictures, and articles around the room.
2. The teacher invites the students, in pairs or triads, to walk around the room, examining each item.
3. Students respond in one of the following ways:
  - Answer specific questions provided by the teacher.
  - Develop a list of questions.
  - Compare and contrast the items.
  - Relate the items to something else.
  - Collect notes regarding the items in a learning log or field book.
  - Respond to each item by writing about it on a paper posted near the item.

## Word/Picture Splash

A Word Splash is a collection of words or key terms from textual material that students will be reading or hearing. Students examine the words and try to predict what they will read or hear.

"Social Change in Canada"



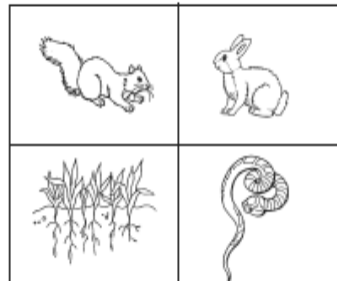
"Wildflowers for Marian"



### Variations:

1. Show students several items and ask them to make predictions about the story or article they are about to read or hear.
2. Word Splash may be used with pictures for younger students. Students may predict the story by looking at or sequencing pictures.

### Sample:



## Story Mapping

Title \_\_\_\_\_ Name \_\_\_\_\_

Author \_\_\_\_\_ Illustrator \_\_\_\_\_ Date \_\_\_\_\_

Who?	Where?

Draw a picture about the story.

What happens in the story?		
Beginning	Middle	End

## Mind Maps

Mind mapping is a brainstorming activity in which students arrange images and ideas in clusters around a stimulus word. Mapping helps students to see the natural, non-linear relationships among their ideas, feelings, and images on a given subject. This strategy may be used throughout the learning process. As a pre-writing strategy, mapping helps students to generate and organize ideas.

### Purposes:

1. To activate prior knowledge
2. To generate ideas in pre-writing.

### Steps:

1. Each student makes a circle on a piece of paper and puts the stimulus word or topic in the middle.
2. Individually, students brainstorm for ideas, images, and feelings. They place words, phrases, or images around the stimulus word in clusters representing connections they see.
3. Students discuss their clusters with a partner and add ideas or connections.
4. Students share their maps with the whole class. The teacher has an opportunity to extend students' prior knowledge and to correct misconceptions by making a map for the whole class on the blackboard.

**Sample:**  
Grade 4 -  
Preparation  
for Writing



## Learning Log

The learning log allows students to write their way through to understanding, and allows teachers to monitor student learning. (The Focused Free-Write strategy discussed in the activating strategies section of the *Success For All Learners* document can also be used for this purpose.) In teaching the learning log, teachers need to describe the strategy, model its use, and let students move from guided practice to independent practice. Teachers may either provide students with prompts to help them focus, or pose problems and have students reflect on them in their logs. Students often use clusters and webs in their logs, as well as pictures and words.

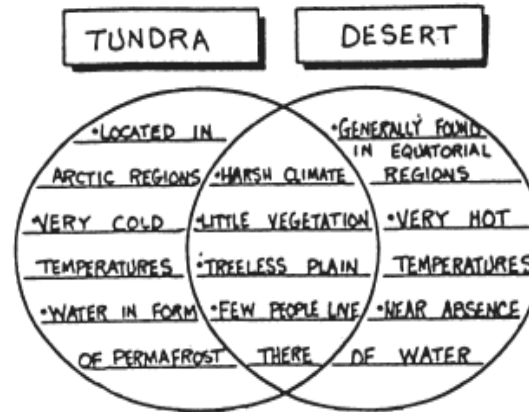
Learning logs are also effective ways to increase student metacognition. Through discussion, students can be taught to reflect on their learning:

- How did I find myself thinking about this?
- What did I learn about myself from doing this?
- What would have helped me to do it differently?



## Venn Diagram

3 3



- C** - capitalization
- O** - overall appearance (organization)
- P** - punctuation
- S** - spelling

### 5-STEP EDITING CHECKLIST

	Self	Partner	Editor-In-Chief
<b>Meaning</b>			
✓ Does it make sense and say what I think it says?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Capitalization

✓ Did I use capital letters correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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- I
- first word of a sentence
- names of people, pets, cities, towns, countries, streets, days, months, titles

## Anticipation Guide

Course \_\_\_\_\_ Unit \_\_\_\_\_

Statements	Your Response
	Initial:  After:  Why:
	Initial:  After:  Why:

### Active Viewing

#### Video/Articles/Slides Analysis

Name/topic of  
article/video/slides: \_\_\_\_\_

Name: \_\_\_\_\_

<p>1. In one sentence, give the topic or main idea of the presentation</p> <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>	<p>2. Draw a picture or diagram which illustrates something important about the presentation.</p> <div style="border: 1px solid black; height: 150px; margin-top: 5px;"></div>
<p>3. List important points or details about the presentation.</p> <div style="border: 1px solid black; height: 150px; margin-top: 5px;"></div>	<p>4. Write three discussion questions about the video/article/slides.</p> <div style="border: 1px solid black; height: 150px; margin-top: 5px;"></div>
<p>5. Explain how the video/articles/slides connects to the topic or unit you are studying in class.</p> <div style="border: 1px solid black; height: 50px; margin-top: 5px;"></div>	

# Do Your LAPS

For the next few minutes, you will

- a. listen to a speaker
- b. watch a movie or video called \_\_\_\_\_
- c. enjoy a presentation
- d. \_\_\_\_\_

**Listen: Ask yourself questions (record them here).**

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**Picture what you hear (and draw it).**

**Summarize what you heard (in a paragraph or two).**

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Admit Slip	Admit Slip	Exit Slip	Exit Slip
<p>Questions to ask the firefighter who is visiting:</p> <ol style="list-style-type: none"><li>1. Why is your hat shaped like that?</li><li>2. Why are the trucks yellow now?</li><li>3. Have you ever been trapped in a burning building?</li></ol>		<p>What I learned about the job of a firefighter:</p> <ol style="list-style-type: none"><li>1. The hat is shaped as it is to keep water from going down inside their clothing.</li><li>2. Yellow is an easy colour to see day or night.</li><li>3. Firefighters are careful not to go into buildings where they might be trapped.</li></ol>	

## Concept Overview

**Key word or concept:**

**Draw a figurative representation.**

**Write down two questions about the concept.**

**Create an analogy.**

**Write an explanation or definition in your own words. You will be paraphrasing.**

**List facts (at least five).**

### Three-Point Approach for Words and Concepts

Definition _____ _____ _____ _____	Word or Concept	Diagram
	Synonym/Example	

Definition _____ _____ _____ _____	Word or Concept	Diagram
	Synonym/Example	

Definition _____ _____ _____ _____	Word or Concept	Diagram
	Synonym/Example	

### Frames and Maps

1. Students complete the frames independently or in small groups. They may then be asked to move into a Think-Pair-Share strategy.
2. Students use the frames until they are able to internalize the structures they provide, and organize their process independently.

### Information Mapping

1. The teacher gives students an article.
2. Students skim the headings and read the first and last paragraphs of the article.
3. Students read the whole article and identify the main ideas and supporting details. They note these on their maps.

## SQ3R

SQ3R is a classic review strategy, developed by F.P. Robinson in 1946. SQ3R is an acronym for the steps students can use for effective studying:

- **Survey:** Look over the material to get the big picture.
- **Question:** Speculate about the contents; ask yourself questions to establish objectives for learning.
- **Read:** Read the passage or notes.
- **Recite:** Orally rehearse the material.
- **Review:** After 10 minutes, jot down everything that you can recall. Check against your notes.

This strategy is sometimes modified with the addition of two more Rs:

- **Rite:** Write a summary of the contents.
- **Reflect:** As a final step, reflect on your learning.

### Look It Over

What I See	What This Tells Me

## Paragraph Frame

Title:

Introductory sentence:

First detail sentence (begin with a transition word):

Follow-up sentence (more information about the first detail):

Second detail sentence (begin with a transition word):

Follow-up sentence (more information about the second detail):

Third detail sentence (begin with a transition word):

Follow-up sentence (more information about the third detail):

Concluding sentence (begin with a concluding transition):

### LINK (List – Inquire – Note – Know)

1. The teacher shows a picture, diagram, or key word or term.

#### LIST

2. Working individually, students list everything that comes to mind.

Working with the whole class, the teacher asks students to give their responses and lists them on an overhead or a blackboard.

#### INQUIRE

3. In small groups, students inquire of each other. They ask for clarification or more information about the points listed. The teacher may also clarify any important misconceptions that could affect the students' understanding of the concept.

#### NOTE

4. With the overhead turned off, students note (write, list, draw) everything that they have learned. If students appear to have a number of misconceptions, the teacher may wish to make another list of student-suggested points on the overhead.

#### KNOW

5. Students read, view, or listen, and then confirm what they know.

**PACER** is an acronym for a test-writing strategy that involves the following steps:

- **Preview** the whole test, taking note of important instructions.
- **Arrange** your time: Note how many marks are given for each question. Estimate the length of time you can allow yourself for each section of the test.
- **Clue** words: Look for and highlight key words (e.g., List, Discuss, Show all your work, Give examples, Answer any THREE of the following, Draw a diagram).
- **Easy** questions first: Find the easy questions and answer them first. If there are multiple-choice questions, reduce the choices.
- **Review** the test before handing it in. Answer all the questions.

**Compare and Contrast Frame**

Unit \_\_\_\_\_ Topic \_\_\_\_\_

C  
O  
M  
P  
A  
R  
E

How are \_\_\_\_\_ and \_\_\_\_\_ alike?

C  
O  
N  
T  
R  
A  
S  
T

How are \_\_\_\_\_ and \_\_\_\_\_ different?

Write a statement to compare and contrast the two terms, concepts or events.

**R.A.P.**

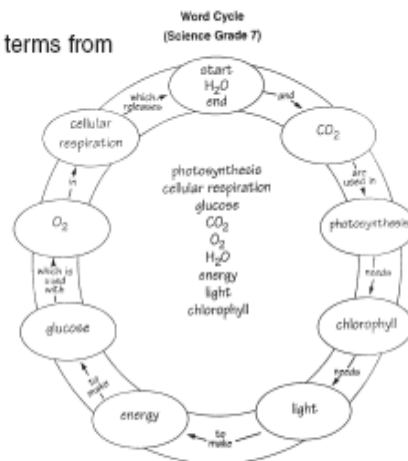
**R. READ** - Read the paragraph silently and think about the meaning.

**A. ASK** - Ask what is the main idea and what details support it?

**P. PARAPHRASE** - Put the ideas into a sentence using your own words.

## Word Cycle

1. The teacher lists nine vocabulary terms from the unit in the centre of the cycle.
2. The teacher asks a student to choose the initial two words and identify the connection between them. The words are placed in adjoining ovals, with the relationship between the words written in the band that connects these ovals.
3. Students continue this process until the cycle is complete.



## Concept Frame

Concept		Examples
Characteristics		
What is it like?	What is it unlike?	Can you illustrate it?
Definition		

Developed by Spencer Kagan, Co-op Co-op can be used at any stage in the learning process. It is particularly useful at the end of a unit, as a vehicle for students to integrate and extend their learning. Co-op Co-op structures the class so that students are cooperating within teams and with the whole class to reach a class goal.

The 10 steps of Co-op Co-op are:

1. **Student-centered class discussion:** Reading, lectures, films and other experiences are followed by class discussion to uncover and stimulate curiosity. The aim of the discussion is not to lead students to predetermined topics for study; the discussion should lead to an understanding of what students want to learn or experience in relation to the topic to be covered.
2. **Selection of student teams:** Students are assigned to heterogeneous groups.
3. **Team-building and skill development:** Co-op Co-op cannot proceed successfully until the members of each team feel some identification with that team. The number and type of team building activities will depend on the needs of the class. Skill development, which begins at this stage, is an ongoing part of Co-op Co-op.
4. **Team topic selection:** Students are reminded of the topics the class identified in step 1, and each group chooses a topic, taking responsibility for one part of class's learning goals.
5. **Mini-topic selection:** Each group divides its topic into selections to create a division of labour among group members. There may be some overlap of these mini-topics, but each one must also make a unique contribution to the whole. Each student in the group will become the group's expert on one mini-topic.
6. **Preparation of mini-topic presentations:** Students research and organize materials on their mini-topics. The use of both primary and secondary research is encouraged.
7. **Mini-topic presentations:** Students present their mini-topics to their partners. These are to be formal presentations, with the presenter standing, and a specific time allotment. After the mini-topic presentation, the whole group has a wealth of information on the topic.
8. **Preparation of Team presentations:** The team discusses its topic thoroughly, with the goal of synthesizing and integrating the material each member presented, and exploring any questions that have arisen. The groups final presentation requires synthesis; it cannot simply be a panel with each member presenting his or her mini-topic. The form of presentation will be determined by the material. For example, it may be a debate, a Gallery Walk (see Grade 1), a demonstration, or a drama.
9. **Team presentation:** The team is responsible for arranging the time and the classroom space for the presentation.
10. **Reflection and evaluation:** The evaluation has three components: teammates evaluate each mini-topic presentation, the class evaluates the major team presentations, and the teacher evaluates the papers each student writes on his or her mini-topic. Students participate in the construction of evaluation rubrics. The class reflects on the group process.

### Jigsaw: A Cooperative Learning Strategy

Jigsaw was developed in 1978, and has since been modified in various ways. This cooperative learning strategy is similar to Co-op Co-op in that students become experts on part of a topic, which they then share with their group; its central difference is that the topic and learning materials are teacher determined.

Jigsaw requires that each member of a student team be given a unique subsection of curriculum materials that is comprehensible on its own. To master this material, each team member meets with students from other teams who have been assigned the same material to learn. The group then discusses means of teaching the material to their respective team members. The teams re-form, and each student teaches the others his or her segment of the material. Students take individual tests on the material.

### Explanation Planner

What is being explained?

What \_\_\_\_\_ is needed?



What \_\_\_\_\_ is needed?

**Signal Words**

second

meanwhile

while

begin with

finally

before

after that

What are the steps?  
(Use a signal word with each step.)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Signal Words**

at last

now

after

then

afterwards

first

next

Introductory (grabber) sentence: \_\_\_\_\_

\_\_\_\_\_

Concluding (clincher) sentence: \_\_\_\_\_

\_\_\_\_\_

### IDEAL Problem-Solving Frame

Name \_\_\_\_\_

Unit \_\_\_\_\_ Content \_\_\_\_\_ Date \_\_\_\_\_

Text \_\_\_\_\_ Pages \_\_\_\_\_ Problem Numbers \_\_\_\_\_

**What do the letters in IDEAL stand for?**

**I** – **Identify** what information you must find and what information you are given.

**D**– **Decide** what steps you must take.

**E** – Write out the **equations(s)** with all the units; **estimate** an answer.

**A**– Find the **answer**.

**L** – **Look** back and check your answer; compare to the estimate.

Problem Number	Protocol	Work
	I	
	D	
	E	
	A	
	L	

**Note-Making Methods****Overhead Notes**

The purposes of the circulatory system are:

- to transport needed substances (oxygen and nutrients) to all living body cells.
- to remove wastes (carbon dioxide and nitrogen wastes) from those cells.
- to defend the body.

**Note Frame**

The purposes of the \_\_\_\_\_ system are:

- to \_\_\_\_\_ needed substances (oxygen and nutrients) to all living body cells.
- to remove \_\_\_\_\_ (carbon \_\_\_\_\_ and nitrogen wastes) from those cells.
- to \_\_\_\_\_ the body.

**Two Column Notes**

Class	Topic	Date
	<b>Main Ideas</b>	<b>Details or Support</b>

**Senior**

### Knowledge Chart

Is a variation of KWL (see Grade 1 section). *The Knowledge Chart* substitutes "Need to Know" for "Want to Know".

**Knowledge Chart**

Course \_\_\_\_\_

Unit \_\_\_\_\_

What do you know about

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_?

Know now (draw:)	Know now (list):
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Need to know:

List what you have learned:	Final concept map or drawing:
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### Seven-Step Knowledge Chart

Topic _____
1. Work individually. List everything that you know about the topic.
2. Work with a partner. Add to your lists and put an asterisk (*) beside anything about which you are unsure.
3. Work with your partner. List anything that you might wish to know about the subject, or anything that you think you might need to know.
4. Discuss with the whole group.
5. Participate in the lesson (read, view, discuss).
6. List everything that you have learned about the topic.
7. What questions do you have that have not been answered?

# Graphic Organizer

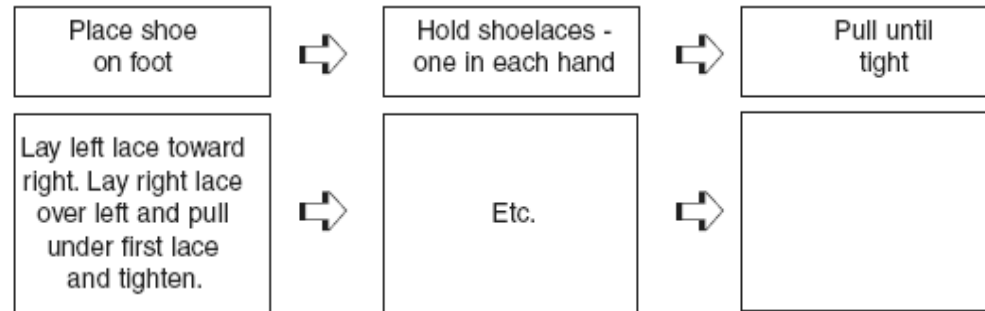
Senior

(

This is a problem/solution organizer which can be done in a sequence of steps. e.g.

**Problem:** The nursery school class is learning how to tie their shoes.

**Steps:**



**Solution (or result):**

**Graphic Organizer**



*Sequential Steps*

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

	Skill	Check
	Know	Need To Know
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

## Charting the Patterns

Title	Characters	Setting
Problem/Conflict	Events	
Resolution		

Students need to have a similar grasp of the most common organizational patterns used in expository text:

Title	Thesis/Topic	Main Ideas
Subtopics	Argumentation/Details	
1.	1.	
2.	2.	
3.	3.	
4.	4.	
Conclusion		

Doris Cook (1993) calls the organizational patterns that characterize expository writing “frames,” and categorizes them as frames that

- contain one major element or idea, plus supporting information, such as a proposition and its support
- describe a sequence, such as a goal, action, or outcome
- contain two or more important elements or ideas, such as a problem and its solution, or comparison and contrast.

Teaching students to recognize organizational structures of expository text can be accomplished by

- teaching them the cue words that writers use to signal the structure they are using
- using questions that cue students to the structure
- providing students with graphic organizers on which to chart textual information.

Sample charts follow.

Text Structure	Cue Words	Frame Questions
1. Sequence	finally, then, now, to begin with, before	<ul style="list-style-type: none"> <li>• How did it begin?</li> <li>• What are the steps?</li> </ul>
2. Goal/action/outcome	if, although, unless, providing, whenever	<ul style="list-style-type: none"> <li>• What is the goal?</li> <li>• What is the outcome?</li> </ul>

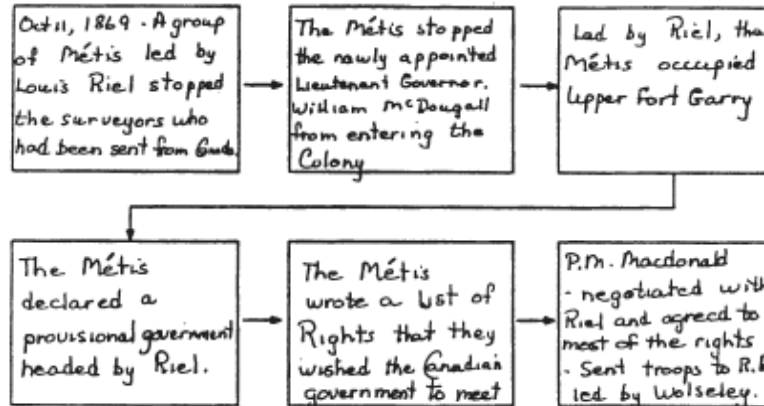
Graphic Organizer

PROBLEM - STEPS/EVENTS - SOLUTION/OUTCOME,

GOAL - STEPS/EVENTS - RESULTS/OUTCOME

Senior 3

**Problem:** The new government of Canada wished to expand West. The Métis population in the Red River area feared this takeover and the rush of settlers from the East that could follow the takeover.



**Outcome:**

- The Métis were treated like rebels by the troops
- Riel fled as the troops approached.
- Many Métis left the Red River area and moved further west.
- In 1870, the Man. toba Act created the province of Manitoba.
- Catholic and Protestant Schools were to co exist
- Both the French and English language were allowed in gov't and court.

## The Debate

The best test of skill in arguing clearly and logically is debating informally or formally.

In an *informal debate* the class is divided into two sides – the affirmative and the negative. Volunteer speakers from each side contribute alternately. Three impartial judges should decide which is the winning team.

A *formal debate* is a contest between two teams who test their skill in argument to win audience support.

### A. The Subject

- It must have two sides which are capable of being argued.
- To avoid confusion, the subject must be stated positively.
- It should be stated clearly and briefly.

### B. The Debaters

- The side which supports the subject is called the affirmative; the side that does not, the negative.
- Each team must prepare its argument carefully and decide which points are to be covered by each speaker.
- Each side may have two or three speakers.

### C. The Procedure

- The chairman announces the topic, introduces the speakers, explains the time limit, and announces the judges' decision.
- The debaters speak in this order:
  1. First affirmative
  2. First negative
  3. Second affirmative
  4. Second negative
- The first speaker for the affirmative makes his rebuttal or the first negative has his rebuttal followed by the affirmative.

### D. The Judgment

- The decision is given to the side which has more effectively presented and supported/refuted the argument.



## Carousel

Carousels are an efficient means of organizing interaction so that the students can exchange ideas with many of their classmates in a short time. Use a carousel to allow students to share opinions or information they have discovered through research.

1. The class forms two circles, one inside the other, with students in the inner and outer rings facing each other. If exchanges are to be brief, students can stand. For longer exchanges, and in situations where students are expected to make notes of new information, each student should have a chair.
2. Students who are facing each other share their ideas and information for a specified time period (e.g., two minutes).
3. At a signal, the outside circle rotates so that each student faces a new partner. Sharing resumes until the next signal.
4. When students in the outside circle have shared with each student in the inside circle, the carousel is finished. Students can then synthesize in writing the information they have gathered.

## Strategies for Independent Learning

### Editing

The process of producing various drafts of writing assignments is an essential classroom activity, with provision made for conferences with the teacher and workshops with other students at various stages. Students also need to learn skills for doing the final edit of writing assignments on their own.

In the final edit, students need to do the following:

- Let the piece “cool down.” Writers have a more objective view of their work if they read it a day or two after it is written.
  
- Use strategies to find errors that the eye glosses over:
  - Read aloud.
  - Read backwards (a strategy that professional copy editors use).
  - Read several times, each time focusing on a particular concern (e.g. sentence structure).
  
- Highlight words that may not be spelled correctly, and then follow these steps:
  - Try writing the word in other ways. (Which one looks right?)
  - Say the word syllable by syllable while writing it.
  - Think of what the root word may be. (Ask, “How do I spell the root word? Do I have to change the spelling of the root when I add a suffix?”)
  - Think of the meaning of the word (useful for homonyms such as there, their, and they’re).
  - Use memory tricks for some words (e.g., a piece of pie)
  - Check the dictionary.

### Note Making

Students who have not been taught to make notes often use a variety of ineffective methods such as:

- trying to write everything the speaker says
- writing only what the speaker puts on the blackboard, and therefore missing important points
- listing items with no indication of their connection or relative importance.

Effective note making is an active skill. Students need to be taught to:

- think about the purpose of a presentation
- listen for a speaker’s organizational cues
- recognize and disregard digressions, repetition for emphasis, and extraneous examples
- use a method that shows the connection between concepts and their relative importance.

Teachers can model note-making methods by making notes themselves on the overhead during a presentation or video. Alternatively, students can compare their notes in small groups after a presentation, discussing the decisions each made about the relative importance of various items.

## DRTA (Directed Reading-Thinking Activity)

In addition to activating prior knowledge, the DRTA strategy helps students to make inferences while they read. The teacher guides students through a reading selection, helping them to formulate questions, make predictions, and validate or reject their predictions. The strategy should be taught over time so that the teacher can gradually reduce guidance as students begin to use the strategy independently.

DRTA can also be used as a general model for teaching. Students could be asked, for example, to look at the figures of a series of quadrilaterals and make predictions about their properties, confirming or rejecting their predictions after the lesson.

- Purposes:**
1. To activate prior knowledge.
  2. To help students predict and set a purpose for their reading.

- Steps:**
1. The teacher asks students to look at the title, pictures, and any other textual features of the reading selection, and to share what they already know about the subject.
  2. The teacher asks students to predict what the text will be about, and to support their predictions.
  3. Students read the text silently, keeping their predictions in mind as they read.
  4. Students confirm or reject their predictions, giving evidence or proof from the text.
  5. The cycle is repeated with the next section of reading.

## Picture Cue Frame

- Purposes:**
1. To help students select details to remember from a video or oral presentation.
  2. To teach students to categorize information.

- Steps:**
1. The teacher gives students a sheet divided into small squares.
  2. As students listen to a video or presentation, they sketch a simple picture in each box.
  3. After the presentation, students can cut the pictures apart and write a sentence for each.
  4. Students can categorize the pictures. Each group of pictures and sentences forms a paragraph. The paragraphs combine into a complete report.

## Lesson Frame

In preparing a lesson or unit overview, teachers construct the frame that best suits their subject matter, grade, and classroom and lesson organization. (See next page for a blank example of a Lesson Frame.) Teachers often put lesson frames on an overhead transparency or erasable poster so that they can reuse them each class and familiarize students with their purpose and format. Some teachers use the blackboard for a lesson overview. What is important is that this overview be provided in writing to accommodate visual learners.

- Purposes:**
1. To help students focus on the goals of the lesson.
  2. To place the lesson in the context of the unit.

**Steps: Alternative procedures**

1. The teacher fills out the Lesson Frame prior to the class and discusses it with students.
2. The teacher and students fill out the Lesson Frame together.

**Sample:**

### Lesson Frame

<b>Course:</b> Biology 40S	<b>Topic:</b> Genetic Variability
<b>Lesson Outline</b> 1. Introduction <ul style="list-style-type: none"> <li>• Focused Free-Write             <ul style="list-style-type: none"> <li>- Why are organisms similar to their parents and yet unique?</li> <li>- How are you similar to your parents?</li> <li>- How are you different?</li> </ul> </li> </ul>	<b>Date:</b> Monday, February 5  <b>Lesson Outcomes</b> <ul style="list-style-type: none"> <li>• To identify the variations in inherited human traits.</li> <li>• To focus on monogenetic traits.</li> <li>• To apply genetic terminology.</li> </ul>
<b>Assignment</b> 1. Complete the Focused Free-Write and share your writing using the Listen-Think-Pair-Share strategy. 2. In your group of two, identify personal characteristics.	
<b>Make note of this:</b> <ul style="list-style-type: none"> <li>• Hand in your signed course outlines by Friday.</li> <li>• You will write the introductory quiz next Tuesday.</li> </ul>	

# Lesson Frame

Senior

I

Course

Topic

Lesson Outline

Date

Lesson Outcomes

Assignment

Make note of this

## Reciprocal Reading

Reciprocal Reading is an interactive strategy that is particularly useful when the subject material is difficult and requires active reading to construct personal meaning. It teaches students to ask questions that will enhance the skills of inferring and making connections between what the author says and what the students know. It can be used across the curriculum.

- Purposes:**
1. To provide variety and increase student interest in the reading material.
  2. To promote long-term improvement of literacy and communication, problem solving, and human relations skills.
  3. To create a "community of learners."

- Steps:**
1. The teacher explains the purpose for using the Reciprocal Reading strategy and the various types of questions to be taught and modelled.  
The three general categories of questions are:
    - **On the lines** - answers can be found by looking in the text.
    - **Between the lines** - answers can be found by problem solving, inferring, or using the clues to build connections.
    - **Beyond the line or in your head** - answers can be found by thinking of what is known already from experience and putting this knowledge to work.
  2. The students and teacher silently read the passage of text.  
(The text may be placed on an overhead and uncovered as required.)
  3. Students close their books and a team of three or four volunteers lead the class discussion by posing questions about the reading.
  4. The teacher helps make connections, models good questions, and clarifies and extends thinking.
  5. After reading the next section of text, the roles change, so that the team answers questions posed by classmates.
  6. Reading continues in this manner, with the role of the questioners changing.
  7. When several passages have been analyzed, the teacher has students predict what might follow in the text.
  8. Students check their predictions after they have finished reading, and the teacher leads a follow-up discussion on what they have discovered.
  9. Students may be given time for written reflection on the effect this strategy has had on their individual thinking and learning.
  10. After several sessions using this strategy, students can work in groups of three or four, formulating and responding to one another's questions.

## Focused Free-Write

The Focused Free-Write is a writing-to-learn strategy. It can be part of a learning log. (Learning logs are discussed in the Grade 2 section.)

**Purpose:** To activate and extend prior knowledge.

- Steps:**
1. Students write for a few minutes about the subject to be studied, using a prompt prepared by the teacher.
  2. Students share their writings with the class.

**Samples:** What I Know about red sided garter snakes:  
 In late April or early May all the males come pouring out of their pit to mate. The females come out one by one (or in pairs) because if they all came out like the males the babies might die, along with some of the snakes if there was a frost. When a female comes out of the pit, she let out an odor that tells the males that she is ready to mate, after she has mated she lets out a different odor that tells the males that she has mated and to bug off. When the female comes out of her pit, quite a few males rush to her and try to mate, but only one male will succeed.

## Fact-Based and Issue-Based Article Analysis

Fact-Based and Issue-Based Article Analysis frames stress the higher-level thinking skills of analysis and evaluation, and different learning styles. (See Attachments 21 and 22 in the *Success For All* document.) They may be used as an alternative to the traditional written report. Teachers are able to see students' reasoning at a glance.

- Purposes:**
1. To gain information from journal or newspaper articles, and to develop further understanding of a subject.
  2. To provide opportunities to practise analysis and evaluation.
  3. To distinguish between factual information and opinion.
  4. To allow students to respond through various learning styles.
  5. To provide a method of response not based entirely on linguistic skills.

- Steps:**
1. The teacher photocopies the Fact-Based and Issue-Based Article Analysis frames back to back.
  2. The teacher provides students with, or has students choose, an article to analyze.
  3. Students read the article.
  4. Students decide whether the article is fact based or issue/opinion-based.
  5. Students analyze the article and fill in the appropriate frame.
  6. Teachers often assign marks to these completed frames.

# Fact-Based and Issue-Based Article Analysis

## Samples:

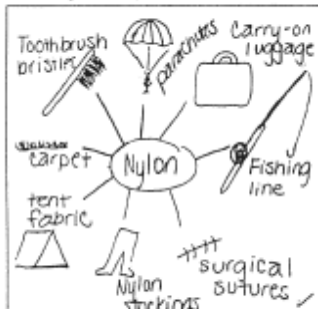
### Fact-Based Article Analysis

Chemistry 30S

Key concept (written in a sentence):

The introduction of nylon 50 years ago has totally revolutionized the way we live.

Draw a figurative representation.



What are the scientific facts? List at least five.

1. Polymers are molecular chains of sub-units.
2. Nylon can be heat set to make its yarns coil and stretch much like telephone cords.
3. Chemists can string some of the polymer sub-units together in specific order.
4. Polymers can sometimes be made to fold up into molecular objects.
5. The simple rearrangement of molecules can transform air, water, and coal into nylon.

Relevance to today: This is important or not important because ...

Nylon is very important today because it has created so many things and made so many changes in our lives. It has provided a far better material for many industries and has allowed the public to reap the benefits of these changes (e.g. no waiting at airports; stronger, sheerer stockings; affordable carpet; etc.). Nylon has also opened up the way for new materials and new technologies such as Teflon, polyester, Spandex, recombinant DNA, biotechnology, and nanotechnology. Nanotechnology will surely be a great device in the future.

Write an article summary or definition in your own words. Do not list facts. Give an overview.

Nylon was the first entirely synthetic fibre and it totally changed industry and everyday life. Nylon was used for many things (luggage, toothbrushes, carpet, fishing line, surgical sutures), but perhaps its best known use was in fabrics. The popularity of nylon stockings led to riots in the 1940s. The strength and sheerness of nylon made it the ideal choice and was also used in parachute cloth ropes and tent fabric.

Nylon also led to other "unnatural" fibres (Teflon, polyester, Spandex) as well as work with recombinant DNA and the biotechnology of today. Work with protein polymers is likely to create new methods of curing disease and to serve as very small machines.

List your questions (at least two).

1. What are sub-units?
2. What is recombinant DNA?

Explain the technology presented.

Polymer technology was what created nylon. It involved stringing the sub-units of polymers together in a specific order to make a new substance. Polymer technology led to nanotechnology, which is folding up polymers into molecular objects which can serve as pieces of extremely small machines and electronic components. With molecular devices, one could make a microscopic computer.

List at least five key words.

- polymer
- revolutionized
- futures
- rearrangement
- molecular
- spin-offs

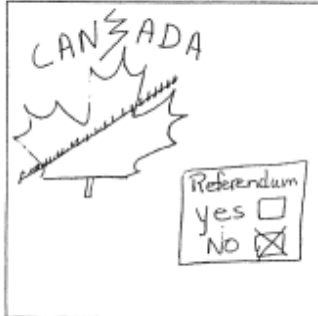
### Issue-Based Article Analysis

Senior 3 History

Issue (written as a question).

Will the Parti Québécois and the Bloc convince a majority of voters to vote for separation?

Draw a figurative representation.



What is the author's opinion?

Give one piece of evidence.

The author seems to think that the rest of Canada and especially the Federal gov should be more involved. He says, "It is time that our Federal politics move to convince Quebecers to stay in Canada."

Relevance to today (this is important or not important because ...)

This issue of a referendum in Québec is very important today because it concerns the future of Canada. It really has to do with the future of everyone. It is important that we understand how we might be affected.

Write a summary in your own words (paraphrase).

An election (another referendum) has been called in Québec. The people in Québec are being asked by Bouchard and Parizeau to vote for separation. Many other Canadians are watching from a distance and the Federal Government has not taken a strong stand. The future of Canada is at stake.

List your questions (at least two).

If Québec separates from Canada how will the people in the West be affected?  
Can Québec separate if people vote for it?  
Does the rest of Canada get a vote?

What is your opinion?

I believe that everyone in Canada should have a vote if there is a vote that can destroy the country.

## Note-Making Methods

- **Two Column Notes:** This is a hierarchical method of note making that requires students to distinguish between main ideas and supporting details. Students use a chart (such as the one that follows) to make notes, writing the main ideas in the left column and supporting details and information in the right.

Two Column Notes		
Class	Topic	Date
<b>Main Ideas</b>	<b>Details or Support</b>	

## Organizing Handouts

Some students need help in organizing handouts. Each piece of paper given out should specify whether it is to be

- used in this class and then recycled
- filled in and returned to the teacher
- filed in the student's binder
- **Graphic organizers:** Teachers can provide students with blank graphic organizers when the material they are studying has a particular organizational pattern (e.g., comparison and contrast, cause and effect).
- **Mind maps (including clustering and webbing):** Mapping is another hierarchical system, showing the relationship among ideas. The shape of a mind map is determined by the creator and the content.

*Steps:* Mapping involves the following steps:

1. Identify the main idea of the presentation or reading selection and write it in the centre of the page. Draw a circle around it.
2. Write the subtopics and secondary ideas around the main idea. Circle each one and connect it with lines to the main idea.
3. Record details around each subtopic. Use single words or brief phrases. Use colours, symbols, abbreviations and pictures.
4. Each subtopic may be connected to other subtopics, as well as to the main topic. Use wavy or double lines to indicate different kinds of connections.

## Researching

Students are sometimes required to collect information for a research project at home. It is important that they be taught appropriate methods of using material from other sources, and that these methods be communicated to adults in the home when research is assigned as homework. The following three-step research system gives students practice in summarizing and synthesizing material. It can be sent home as a handout, so that parents are informed and can help with the research process.

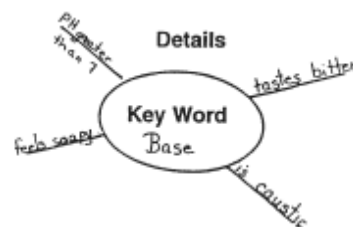
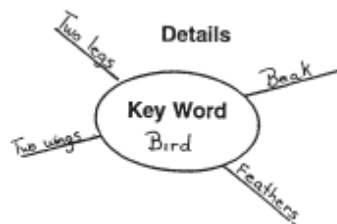
- Steps:*
1. **Read and Mark:** As you read, mark (with a highlighter, sticky notes, or pieces of paper) the parts where you discover something important.
  2. **Talk:** When you have finished reading, go back to each of those marked parts and tell yourself or someone else why you marked them.
  3. **Write:** Record **only** what you **told** yourself or someone else.

**Senior**

**One Idea Category**

Text Structure	Cue Words	Frame Questions
1. Description	further, also, moreover, too	<ul style="list-style-type: none"> <li>• What is it?</li> <li>• Where is it found?</li> </ul>
2. Proposition/support	above all, indicate, suggest, of course	<ul style="list-style-type: none"> <li>• What is the thesis?</li> <li>• How is it supported?</li> </ul>
3. Argumentation for conclusion	in conclusion, if, therefore, for these reasons	<ul style="list-style-type: none"> <li>• What premises support the conclusion?</li> </ul>
4. Concept/definition	specifically, as, for example, for instance, like	<ul style="list-style-type: none"> <li>• How does it work?</li> <li>• What does it do?</li> </ul>

**Graphic Organizer**

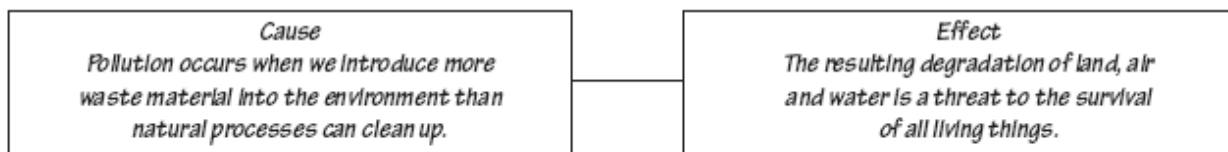


**Two or More Elements Category**

Text Structures	Cue Words	Frame Questions
1. Compare/contrast	likewise, while, yet, regardless, whereas	<ul style="list-style-type: none"> <li>• How are they alike?</li> <li>• How do they differ?</li> </ul>
2. Problem/solution	because, instead of, rather than, therefore	<ul style="list-style-type: none"> <li>• What is the problem?</li> <li>• What is causing it?</li> </ul>
3. Cause/effect	since, then, if . . . then, so that, consequently	<ul style="list-style-type: none"> <li>• What is the result?</li> <li>• What factors caused this to occur?</li> </ul>

**Graphic Organizer**

**Topic: Pollution**



## Preparing for Tests

Students can use various strategies to prepare for tests:

- Students need to ensure that they
  - clearly understand the concepts learned in class
  - recognize patterns within the material (e.g., cause and effect, comparison and contrast)
  - connect new material to their prior knowledge
- Students may find it useful to
  - predict test questions
  - exchange their predicted questions with other students
  - practise answering them

## Writing Tests

PACER is an acronym for a test writing strategy that involves the following steps:

- **Preview** the whole test, taking note of important instructions.
- **Arrange** your time: Note how many marks are given for each question. Estimate the length of time you can allow yourself for each section of the test.
- **Clue** words: Look for and highlight key words (e.g., List, Discuss, Show all your work, Give examples, Answer any THREE of the following, Draw a diagram).
- **Easy** questions first: Find the easy questions and answer them first. If there are multiple-choice questions, reduce the choices.
- **Review** the test before handing it in. Answer all the questions.

## Memorization Strategies

Students often associate studying for tests with **memorization**. Memorization, however, has a limited role in helping students prepare for performance tests that involve higher-order thinking skills.

**Mnemonics** are a useful tool in the instances where memorization is required. Below are some examples:

- **Acronyms** are formed by taking the first letter of the words to be remembered in sequence (E.G., ROY G. BIV for the colours of the spectrum).
- **Acrostics** are variations of acronyms. They are silly sentences formed with words beginning with the same letters as the sequence to be memorized (e.g., *My Very Eager Mother Jumped Straight Up Near Pluto* for the name of the planets). A silly sentence may contain the actual words to be memorized (e.g., *Eight leisured foreigners scaled the weird heights* contains many of the exceptions to the "i before e" rule).
- **Rhymes** (e.g., "i before e except after c.")
- **Visualization** involves creating a mental image of the terms to be remembered in connection with one another. Some students find it helpful to visualize the notes on a page, especially if those notes are graphically arranged, as in a mind map.

## Memory Tips

Students can use the findings of brain research to make their study time more efficient:

- New information will be transferred to long-term memory only if it is reviewed within 10 minutes of learning.
- Spaced repetition is the most effective method of studying. Studying half an hour every day is far more effective than three hours at the end of the week.

## THE ORDER AND LOCATION OF THE STRATEGIES LISTED IN THE BROCHURE.

Active Listening Strategies	K	1	2	3	4
<ul style="list-style-type: none"> <li>• Check 5</li> <li>• SLANT</li> <li>• SWIM</li> </ul>	<ul style="list-style-type: none"> <li>• Listen-Think-Pair-Share</li> <li>• Sort and Predict</li> </ul>	<ul style="list-style-type: none"> <li>• KWL</li> <li>• Gallery Walk</li> <li>• Word/Picture Splash</li> <li>• Story Mapping (Simple Frame)</li> </ul>	<ul style="list-style-type: none"> <li>• Semantic (Mind) Mapping</li> <li>• Learning Logs (Journal Writing)</li> <li>• Process Notes</li> </ul>	<ul style="list-style-type: none"> <li>• Venn Diagrams</li> <li>• COPS</li> <li>• 5-Step Editing Checklist</li> </ul>	<ul style="list-style-type: none"> <li>• Anticipation Guide</li> <li>• Active Viewing</li> <li>• LAPS</li> <li>• Admit &amp; Exit Slips</li> <li>• Concept Organizers</li> </ul>

5	6	7	8	SENIOR 1-4	
<ul style="list-style-type: none"> <li>• 3-Point Approach</li> <li>• Frames &amp; Maps (e.g. More complex than grade 1)</li> <li>• SQ3R</li> <li>• Look It Over</li> </ul>	<ul style="list-style-type: none"> <li>• Paragraph Frame</li> <li>• LINK</li> <li>• PACER</li> <li>• Compare &amp; Contrast Frame</li> <li>• RAP</li> </ul>	<ul style="list-style-type: none"> <li>• Word Cycle</li> <li>• Concept Frame</li> <li>• Co-op Co-op</li> <li>• Jigsaw</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation Planner</li> <li>• IDEAL</li> <li>• Note Frames</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge Chart</li> <li>• Graphic Organizer</li> <li>• Sequential Steps</li> <li>• Charting the Patterns</li> <li>• Debates</li> <li>• Carousel/Inside-Outside Circles</li> <li>• Strategies for Independent Learning                             <ol style="list-style-type: none"> <li>1. Editing</li> <li>2. Note Making</li> <li>3. DRTA</li> <li>4. Picture Cue Frame</li> <li>5. Lesson Frame</li> <li>6. Reciprocal Reading</li> </ol> </li> </ul>	<ol style="list-style-type: none"> <li>7. Focus Free Write</li> <li>8. Fact-Issue Based Article Analysis</li> <li>9. Note Making Methods</li> <li>10. Organizing Handouts</li> <li>11. Research Skills</li> </ol> <ul style="list-style-type: none"> <li>• Test Strategies                             <ol style="list-style-type: none"> <li>1. Pacer (see Grade 6)</li> <li>2. Mnemonics                                     <ol style="list-style-type: none"> <li>a. Acronyms</li> <li>b. Acrostics</li> <li>c. Rhymes</li> <li>d. Visualization</li> </ol> </li> <li>3. Memory Tips</li> </ol> </li> </ul>