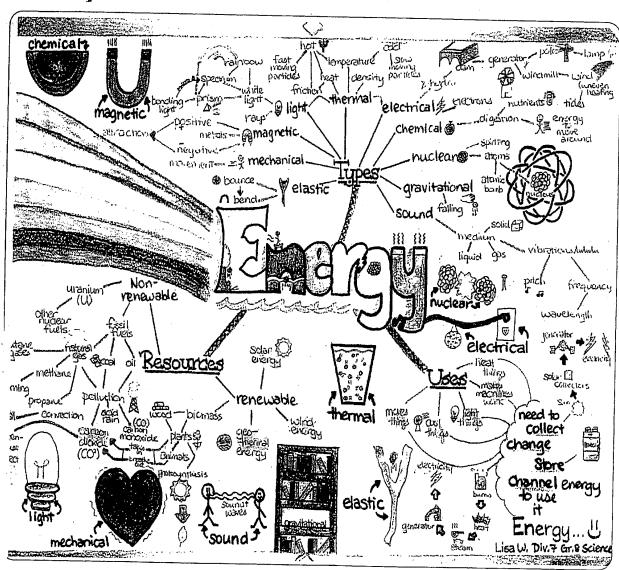
# Becoming Graphically Intelligent

What REALLY Works in Education Conference March 22, 2013

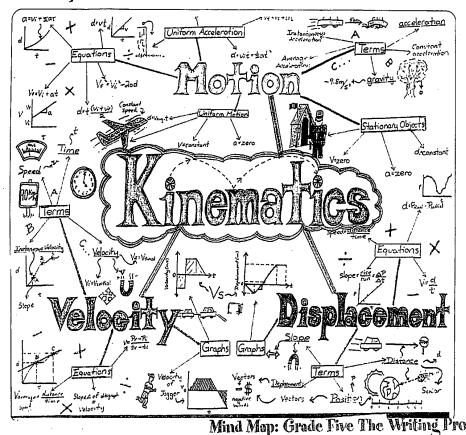
# Dr. Barrie Bennett

Professor Emeritus, University of Toronto

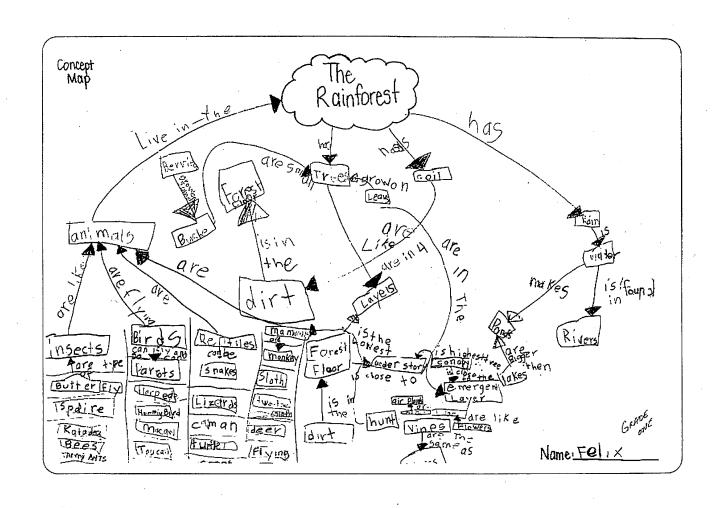
### Mind Map: Grade 8 Science

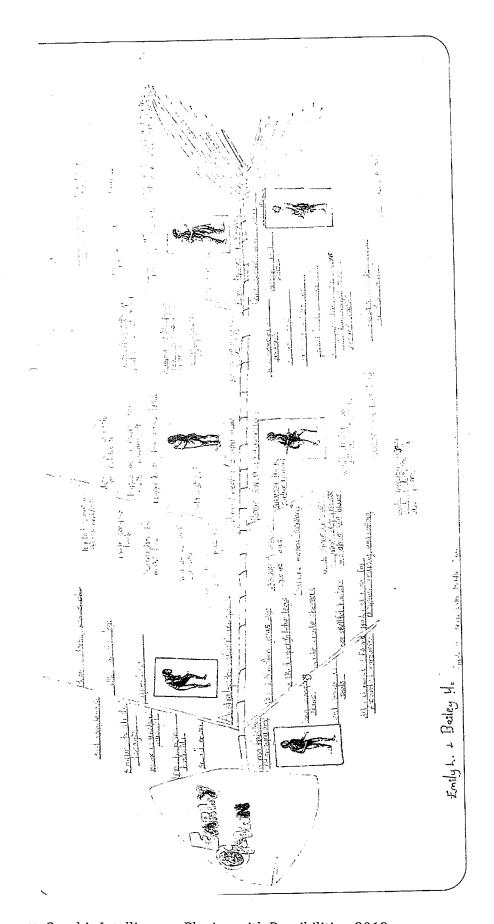


### Mind Map: Grade 12 Science

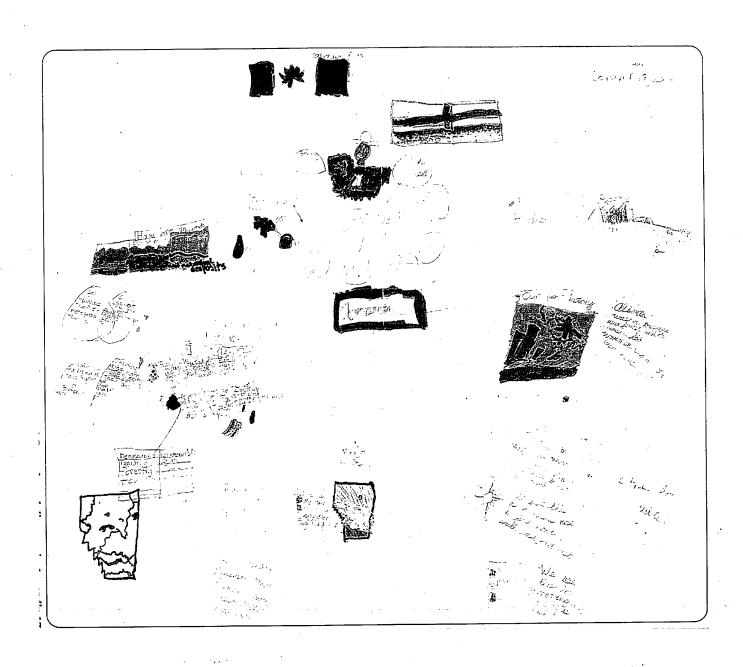


Shape [1] STIMULATION ] [] (méy Adience music & THE PRE-WRITING WRITWG Brainstorming REVISING PROCESS Graphic Organizers content Puntation! Informational Pulails CHARACTER Characters





 $\hbox{@}$  Barrie Bennett, Graphic Intelligence: Playing with Possibilities, 2012



#### Mind Map Feedback Sheet

Name: Date:	Name:		Date:	
-------------	-------	--	-------	--

#### Strengths:

- 1. Clearly defined centre
- 2. Clearly defined centre with an engaging visual to assist with memory
- 3. Effective use of hierarchical structure key ideas branch off first
- 4. Effective use of hierarchical structure most key ideas branch off first
- 5. Identify all key ideas related to the topic
- 6. Identified most key ideas related to the topic
- 7. Effective use of visuals in all key areas
- 8. Effective use of visuals in most key areas
- 9. Effective use of novelty or humour in your visuals
- 10. Colour employed to increase interest
- 11. Colour employed to assist with classifying ideas
- 12. Words spelled correctly
- 13. Most words spelled correctly
- 14. Effective use of other graphic organizers
- 15. Effective use of cross links to show relationships between key areas

#### Suggestions:

- a. Centre is evident, needs to stand out make it bigger, use colour
- b. Need to redesign your centre needs to capture the essence of the topic
- c. You need to classify your ideas little evidence of major ideas
- d. Hierarchical structure needs to be evident did you classify your ideas?
- e. Need to add ideas from the topic studied
- f. Need to add visuals to assist with interest and memory
- g. Need colour to clearly communicate your ideas
- h. Please check your spelling of words
- i. Perhaps consider using other graphic organizers
- j. Need to add cross links to show relationships between key areas

### Mind Maps — Levels of Use Rubric (See the Mind Map Rubric on page 324)

Minimum Student Benefit

Maximum Student Benefit

ì	Level Three Routine	Level Four Refined/Integrative				
ins or reviews Mind gins teaching students by classifying/	Teacher asks students to complete a Mind Map- quickly reviews the process. May still have to do a bit	No explanation from teache students complete the Mind they are skilled at using a M				

Teacher explains or reviews Mind Maps and begins teaching students what is meant by classifying/ analysis and the role those levels of thinking play in the design of the Mind Map.

leacher asks students to complete a Mind Map—quickly reviews the process. May still have to do a bit of work reminding students about how to analyze their information to get the appropriate hierarchical structure.

No explanation from teacher; students complete the Mind Map—they are skilled at using a Mind Map and need no explanation. The only explanation would be related to having them consider integrating other graphic organizers into the process.

The number of times the teacher and student have applied the innovation

The extent to which a

need exists to explain

how to do a Mind Map

Criteria

2 to 5 times

Level Two Mechanica

6 to 10 times

Mind Map Level of Use

10 or more times

The connection to other graphic organizers and/or other instructional innovations

The teacher may be making connections to other instructional methods or graphic organizers — but the application of Mind Maps will be less sophisticated.
Hierarchical structure will be a problem.

Teacher may be making connections to other instructional methods or graphic organizers – if so only one or perhaps two. The application of Mind Maps will be appropriate.

When appropriate, the teacher and students will be making connections to other instructional methods such as the 3-Step Interview or Gallery Tour or graphic organizers (such as Concept Maps, Venn Diagrams, and Flow Charts). The application will be appropriate and thoughtful.

# Rubric for Mind Map Performance Levels

	PERFORMANCE INDICATORS (Observable descriptors indicating extent to which a criterion is met.)				
Criteria	Level One	Level Two	Level Three	Level Four	
Central Image	Not clear; difficult to separate from other information.	Present; not eye catching or memorable.	Clear use of picture or image that relates to key idea.	Stands out and meaningfully grasps the key idea through metaphor or humour.	
Ideas radiate out from central image and from most to least complex	Little to no indication that ideas are connected to and radiating out from centre, from most to least complex.	Ideas radiate out from centre, some confusion as you follow ideas moving from most to least complex.	Ideas clearly connect to central image and ideas, and for the most part move from most to least complex.	Ideas clearly connect to central image and ideas consistently and accurately shift from most to least complex.	
Ideas have key images or key words	Little to no evidence of key images. May have a few keywords or vice-versa.	Images and keywords are evident, but either too few or imprecise.	Images and key words clearly show an understanding of the content, although not that memorable.	Dynamic use of images and keywords. They clearly connect to central image. See use of metaphor, humour, cut-outs from magazines, clipart, etc.	
Colour or codes or links used to illustrate connections between ideas	Little to no use of colour, codes, or links to illustrate connections between ideas.	Obvious attempt is made to use colour, codes or links to enhance clarity and memory—still a bit confusing.	Clearly uses colour, codes, or links to clarify connections and to assist with memory for most aspects of Mind Map.	Effectively uses colour, codes, or links to meaningfully clarify connections for all aspects of Mind Map.	
Depth of coverage	Insufficient coverage of content covered.	Shows a basic level of coverage of key ideas but little extension of ideas.	Shows a solid grasp of most of the content and shows extensions of most key ideas.	Shows a solid grasp of all the content covered. Extensions of the key ideas show a deep understanding of that content.	



## Concept Map Summary: Mind Mapping

Below is a concept map of the key ideas in this chapter.

