

## The Incredible Power of SmartReading

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### The Incredible Power of SmartReading

The purpose of this paper is to describe key elements of SmartReading - a system producing impressive results with all learners, whether struggling or talented.

#### **What is SmartReading?**

SmartReading is a comprehensive, balanced approach to literacy that boosts thinking, sharpens minds and enables learners to develop and retain complex understandings in all areas of the curriculum. This system is easy to implement, highly motivating and designed to instil a love of learning. Confidence grows as learners gain competence.

#### **How does SmartReading work?**

In SmartReading classrooms, teachers use the Nine Steps of SmartLearning (Appendix A) to systematically and explicitly teach students to strategically apply cognitive and metacognitive strategies. Teachers plan instruction based on assessment of achievement, using grade-specific performance standards (provided at the symposium). Through whole class teaching, learners are equipped with specific SmartThinking tools (Close et al. 2005) that develop a range of comprehension strategies. They engage in independent SmartReading to individually apply the thinking tools to texts (read at 95% accuracy), and they develop orthographic knowledge through a system of word study called 'wordwork' (Appendix D: an 11X17 version will be provided at symposium).

#### **What is the research base for SmartReading?**

The SmartReading System brings together the best research on learning and applies it in a comprehensive model (Appendix D). The resulting set of practices empowers learners and enables them to develop more sophisticated understandings. Over the past four years, action research teams involving hundreds of British Columbian educators have implemented the system in their classrooms. As part of their research work, they have had opportunities to take part in classroom-based 'learning rounds'. During these professional interactions, educators work as teams to identify a particular focus for instruction, design a learning

sequence (Appendix C), observe the teaching in action, and analyze and assess the impact of the approach.

### **What effect does SmartReading have on special learners?**

Students working with SmartReading are showing improved achievement, however the most remarkable gains are being made by students with special needs. At this presentation, you will have the opportunity to meet Troy, Brodie, Matthew, Enoch, Darius and Janet – children facing a variety of learning challenges. The growing success of these learners can be attributed to a number of important factors:

- The nine-step SmartLearning process provides a structure that comfortably engages students in a number of interactions before, during and after reading.
- Thoughtfully structured partner-talk, inherent in the nine-step process, provides an engaging and inclusive environment where all learners are supported and able to actively participate.
- A significant difference in the SmartReading approach is that the teacher focuses on one comprehension strategy at a time and uses a number of SmartThinking tools (Close, 2005) to develop skill with the strategy. Learners apply their skills over time, working with a variety of texts.
- Based on research, we identified imagery as one of the most powerful tools that readers bring to a text. Using SmartThinking tools and a variety of partner interactions, our learners are taught to build sensory images as they read, notice similarities and differences in each others' thinking, assimilate details, organize thoughts and make comparisons. This allows them to remember and access what they have read as well as to make other connections (Marzano, 2001; Bell, 1991).

A teacher reflects on the effects of working with imagery over time.

I have been working with a group of students in Grade 5/6 who were all reading below grade level - some very substantially. Using the nine-step SmartLearning process the students on their March assessment for Reading have all moved into the 2.5 to 3 level, and in some cases have reached 4 (on a four-point scale). I fully credit this to the time spent focusing on one strategy, for 6-8 weeks, and in particular IQ - imaging and questioning.

- Another important difference is the process of involving the learners in the assessment cycle. Through the experience of using student samples to develop criteria, learners are able to analyse their work and improve it (Black and Williams, 1998).
- Teachers create classroom environments, based on the principles of learning (Watkins, Carnell, Lodge and Whalley, 1996, 2002) where students actively engage with their tasks, work collaboratively, take responsibility for applying the skills they have been taught and learn to reflect and set goals.

### **Summary**

With systematic and explicit teaching of the critical components of the SmartReading System, we see inspiring progress in learners, regardless of economic circumstances or intellectual capacities. The methodology benefits all, whether struggling or talented. We see significant advances in literacy development, and overall academic achievement, when students work with SmartReading. The approach challenges minds, awakens potentials, builds confidence, develops interpersonal and managerial skills, boosts communication skills and positive multiethnic relations, and equips the teacher to stimulate more sophisticated or higher-level responses. Over time, confidence is kindled by growing competence with a wide-range of skills.

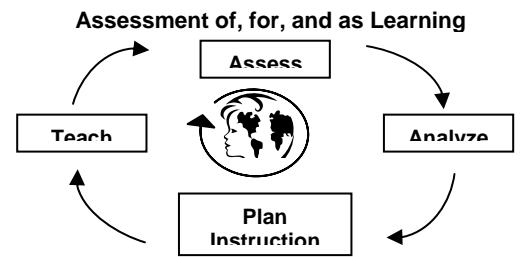
At this symposium, participants will see how the system opened the doors to literacy for a highly challenged fourteen-year old learner working with a special educator. They will also see how a classroom teacher uses SmartReading to successfully integrate five nine year olds, with diverse learning needs, into a regular classroom of thirty-one pupils. As well we will show the effects of SmartReading on student achievement, at the school and district level, over time.

## Appendix A: Research Underpinnings for the Nine Steps of SmartLearning

# SMART LEARNING

BETTER TOOLS. BETTER LEARNING.

## The Nine Steps of SmartLearning



- A step-by-step process for developing deeper understandings and higher levels of response

Talk, structured partner talk, is a critical component of the SmartReading process. We teach the talk processes systematically and explicitly, until the structures are internalized, through teacher modeling and 'think-alouds'. You will see the students working in A/B and Walk-to-Talk partners, and in teams of two or three collaboratively generating ideas.

***Often we have the students engage in A/B structured partner talk. When we systematically invite students to notice, talk about, and reflect on similarities and differences we can double the learning. (Marzano, 2001)***

***Cognitive development is supported when students are encouraged to verbalize their ideas and questions. Discussions allow students to think critically and to consider multiple perspectives. (Braunger & Lewis, 1997)***

***Students' mental abilities originate from social interaction. Learning first occurs within the social context, and only later does the learner internalize it. (Herb, 1997)***

***Conversation builds ideas, facilitates comprehension of text, encourages cognitive development, and fosters growth in expressive language abilities. Partner and small group talk is a way to give students control over the pace and focus of their learning. (Hartman, 1996)***

***The most effective way to increase our ability to pay attention is to look for novelty or distinctions ... Noticing distinctions focuses engagement. Student's attention is on a clearly defined goal. They know what must be done. The feedback from the dialogue stretches their skill with the task. (Langer, 1997; C. Sikzentmihalyi, 1997)***

**Before reading, students complete steps 1-4.**

### 1. Goals

- Goals are set in relation to a particular skill focus or to criteria developed for what powerful readers, writers and thinkers do.
- Criteria are often developed with the students. In partners, students analyze work samples, noticing what works or what is powerful. A class set of criteria is developed, and then students set goals in relation to the established criteria.

### 2. Accessing Prior Knowledge (show what you know)

- Students tap into their own knowledge bases by connecting to what they know about a topic. They draw upon their life experiences, their experiences with other texts, and with events in the world. Generating and discussing their background knowledge builds a foundation for new learning.

***Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but revert to***

***their preconceptions outside the classroom. Teachers must draw out and work with the preexisting understandings that their students bring with them. (Donovan, Bransford & Pellegrino, 1999)***

### **3. Predicting or Hypothesizing**

- Prediction or hypothesis generation sets the stage for the processing of new ideas and information. As the student reads (s)he makes connections. If the prediction is the same as the story, the thinking is reinforced. If the prediction/hypothesis is different the reader adjusts his or her thinking. Both kinds of connections build brainpower. The work becomes the “Velcro” for new learning.
- A/B structured partner talk, and whole class discussion stimulates thinking, develops new understandings, and establishes a focus for new learning.

***Prediction or hypothesis generation is a critical reading skill and has a profound effect on inference and the development of deep understanding. (Marzano, 2001)***

### **4. Questioning**

- Asking, probing or wondering about the content, the ideas, or the author’s purpose engages the reader. A student who can design a thoughtful question is well on the way to providing an insightful answer. Creating questions before and during reading leads to deeper understanding.

***Questioning before reading leads to higher levels of achievement. (Marzano, 2001)***

***Cognitive development is supported when students are encouraged to verbalize their questions. (Braunger & Lewis, 1997)***

***Reason can answer questions but imagination has to ask them (Albert Einstein, as cited in Cornett, 1998)***

***The significance of this strategy lies in its ability to spark imagination and engage readers in a piece of text ... questioning more readers through a piece of wiring as they pursue the unknowns of a story. (Burton, et al, 2000)***

<p><b>As the text is read in ‘chunks’ in step 5, readers pause in order to practice a reading comprehension strategy.</b></p>
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### **5. Chunking ... Processing Information**

- Text (print, media, experiences ...).
- Chunking is one of seven major cognitive strategies. Students use a range of learning processes we call SmartThinking Tools (SmartReading, 2005) to process information and develop comprehension. Through work with the toolkit of strategies the students learn many ways to interact with and respond to text (e.g., IQ-Image & Question, 4-Quadrants, What’s Important and Why? Thinking Like a Photographer...). They work individually, in partners (or triads), and as a whole class to gather information and to develop understandings. They stop at places in a text to talk about important ideas, and why they are important. They use the tools to develop and extend their understandings.
- Reflection on the use of the learning processes and on content understandings is a critical part of the chunking experiences.

***Chunking procedures invite students to gather, retrieve, categorize, and organize information; identify what is important, articulate why it is important, and make connections before they head into the processing of new information. Frames like IQ Image & Question, I’m Picturing & Mining for Gold, and 4-Quadrants invite learners to spatially organize and process information. The organizers become tools that prepare students to interact with content and personalize their understandings. (Close, 2001; Farmer & Wolff, 1991)***

***Chunking always includes rehearsal, an important cognitive strategy. Students are offered opportunities to draft/sketch, listen and talk through their understandings. Thinking originates in collaborative dialogues, which are internalized as 'inner speech', enabling students to do later in 'verbal thought', what they could at first only do by talking with supportive adults or more knowledgeable peers. (Miller, 2001; West, Farmer & Wolff, 1991)***

***To develop competence in an area of inquiry, students must:***

- ***Have a deep foundation of factual information.***
- ***Understand facts and ideas in the context of a conceptual framework.***
- ***Organize knowledge in ways that facilitate retrieval and application. (Donovan, Bransford & Pellegrino, 2000)***

***The explicit engagement of students in the creation and discussion of graphic representations stimulates and increases activities in the brain. (Gerlic & Jausovec, 1999; Given, 2003)***

**Step 6 follows the reading and involves relating and reacting to the context.**

## **6. Responding ... Transforming Understandings**

- After reading, students are invited to think as insiders ... to show what they know. They often write in role as experts (or from a perspective) to explain, or show in detail, their understandings.

***Writing leads to improved reading achievement, reading leads to better writing performance and combined instruction leads to a higher level of thinking than when either process is taught alone. (Braunger & Lewis, 1997)***

***When students listen to drafts and discuss why the chosen passages are powerful, this form of editing for thought has been shown to be the most effective way of improving writing. (Hillocks, 1996)***

***Writing should occur throughout the curriculum and should be the centre piece of language of development because it is through clear writing that thinking emerges. (ASCD, 1997)***

**Steps 7, 8 & 9 involve discussing new ideas, noticing how well the strategy worked and setting new goals.**

## **7. New Ideas, Connections and Questions**

- Students reflect on the content identifying new learning. They reveal connections to other texts, to experiences in their own lives, and to events in the world. They generate new questions to further their learning.

***When we systematically invite learners to notice, talk about, and reflect on similarities and differences we can double the learning. (Marzano, 2001)***

## **8. I noticed ...**

- Students reflect on their own learning in relation to their goals, or goals set by the teacher.
- Teachers often do a 'think a-loud' sharing with the students what they noticed about the learning during the session.

***Students who monitor their learning are more effective learners than those who do not ... People who can watch themselves in the process of learning and analyze their responses, are better learners than those who are less aware of how they learn. They***

***are able to direct and control their use of strategies. (Cross, 1996; Schwartz & Perkins, 1998)***

***Highly developed metacognitive skill, or the ability to bring automated skills into consciousness is characteristic of high intelligence. By developing self-awareness, one is effectively developing one's intelligence. (Brown, 1987; Abbott & Ryan, 2001)***

## **9. New Goals**

- In light of new understandings students set new goals. New goals are often set following the development of criteria with the learners.
- Following a **SmartReading** session a teacher may highlight powerful elements in the student's responses. At the start of the next session, students in A/B partners study their responses to identify why they think the teacher highlighted the parts. The teacher may red 3-4 pieces of writing to the class and ask them to work together to determine why the passages were chosen. Criteria are developed on a T-Square (criterion on one side and evidence on the other).

***Goal-setting activates the metacognitive system of thinking. Goal-setting is an effective enhancer of achievement. (Lipsey & Wilson, 1993; Given, 2003, Marzano, 2001)***

***Involving students in the development of criteria dramatically increases achievement. (Black & William, 1998; Marzano, 2001)***

***A metacognitive approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in the achievement of them. (Donovan, Bransford & Pellegrino, 2001)***

## Appendix B: A Description of the Research Base



### The Research Foundation for the SmartReading Approach

The **SmartReading System** presents one way to show the relationship of the auditory, visual and language systems in the reading process, and reminds us of the critical importance of oral language. 90-95% of poor readers can increase their reading skills to average reading levels if they are engaged in programmes that combine instruction in the critical components. (Lyon, 1998)

The **system** includes three distinct components: word work, fluency, and comprehension - each featuring extensive work with oral language and structured partner talk. Word work includes phonemic awareness and symbol imagery; fluency includes automaticity in decoding and word recognition, and the reading of large amounts of text at the independent level (95% accuracy); and comprehension includes concept imagery and comprehension strategies.

#### From Oral Language to Reading

Studies of areas of the brain used for reading have generally shown that the same areas involved in oral language and comprehension are involved in reading. Dr. Antonio Damasio, a neurologist at the University of Iowa, College of Medicine, defined the relationship between language and reading. Language is a translation of entities, events, relationships and inferences into auditory symbols. Reading may be thought of as a second translation of written symbols to the auditory ones. As far as the brain is concerned reading is language (Damasio and Damasio, 1993).

Cognitive development is supported when students are encouraged to verbalize their ideas and questions. Discussions allow many students to think critically and to consider multiple perspectives (Braunger and Lewis, 1997). Conversation builds ideas, facilitates comprehension of text, encourages cognitive development, and fosters growth in expressive language abilities. Partner/small group talk is a way to give pupils control over the pace and focus of their learning. Talking with others about ideas and work is fundamental to learning. Perceptive, challenging talk is the motor propelling intellectual engagement. The learning of and responding to other people's talk triggers new ideas and connections (Hartman, 1996; Calkins, 1997; Howard 2002, 2000; Fisher, 2003).

#### A. Word Work - Phoneme Awareness and Symbol Imagery

In order for a beginning reader to learn how to connect, or translate printed symbols (letters and letter patterns) into sound, the reader must understand that our speech can be broken into smaller sounds (phoneme awareness, and that the segmented units of speech can be represented by printed forms (phonics). This understanding that written spellings systematically represent the phonemes of spoken words (the alphabetic principle) is absolutely necessary for the development of accurate and rapid word reading skills. Studies initiated to understand how the reading process develops reveal strong evidence that, "...it is not the ear that understands the spoken word, it is the brain that performs this function." (Lyon, 1998)

The reader must be able to visualize the identity, number and sequence of letters in words. Readers must understand that segmented units of speech can be represented by printed forms (phonics), and understand that written spellings systematically represent the phonemes of spoken words (the alphabetic principle) to develop accurate and rapid word reading skills. The reader must become proficient in rapidly reading larger units of print such as syllable patterns, meaningful roots, suffixes and whole words - in context. Readers require substantial practice of phoneme awareness and phonics principles and continual application of those skills in text (Bear, Invernizzi, Tempeton and Johnston, 2003). Word work in SmartReading research classrooms involves an initial assessment, and instruction

targeted precisely to the needs of the students. Word sorting activities, at appropriate levels for each student, will be seen in all of the research classrooms (K-12). Through the preliminary work with word sorts conducted by the 2002-2003 SD No. 40, New Westminster District Research teams we have seen remarkable gains in spelling and reading fluency, and in the applications of spelling in reading and writing.

## **B. Fluency and Automaticity**

The fluency, accuracy, and automaticity in decoding and word recognition must be acquired, and are keys to comprehension. It is vital that children read a large amount of text at their independent level (95% accuracy), and that the text format provides specific practice in the word and comprehension skills being learned. Skills need to be taught within an integrated context with ample practice reading familiar material (Allington, 2002; Pressley, 2002).

Frank Smith (1994) argues that some knowledge of sound/spelling correspondences can make text comprehensible. However there are severe limits on how much phonics can be taught directly; the rules are complex and have numerous exceptions. Smith argues that most of our knowledge of phonics is a result of reading, not the cause.

Smith's view is almost identical to the view presented in *Becoming a Nation of Readers*:

Phonics instruction should aim to teach only the most important and regular letter-to-sound relationships...once the basic relationships have been taught, the best way to get children to refine and extend their knowledge of letter-sound correspondences is through repeated opportunities to read ... (Anderson, R., 1995)

Children vary in the amount of practice that is required for fluency and automaticity. Some read a word once and remember, most need between four and 14 exposures to automatically recognize a word (Marzano, Pollock and Pickering, 2001). Therefore it is vital that children read a large amount of text at their independent reading level (95% accuracy). Juel's (1994) study indicated:

Quality of word recognition in grade one (i.e. being able to recognize words) is more important than quantity of exposure to words...but once there is high quality word recognition...quantity of reading becomes critical (Pp. 124).

The amount of reading that students do in and out of school positively relates to reading achievement, yet most students reported relatively little reading in or out of school (NAEP, 1998; Foertsch, 1992). Since sheer volume of reading has been shown to be a distinguishing feature of high-achievement classrooms (Allington & Johnston, 2000; Pressley et al; 2000, Taylor, 2000), how much reading do children need? Allington (2002) suggests one and half-hours of daily in-school reading would seem a minimum goal given the data provided from various studies. Time engaged in reading...a preferred measure of volume, is important for fostering reading growth. Increasing the volume of guided, self-selected, oral, silent, choral, paired, partner, buddy reading, readers' circles, or almost any combination of these, has been shown to enhance achievement... Volume matters in reading development. And the slower rate, limited self-monitoring, and lack of fluency often predict reading that has gone off track in terms of comprehension. Even though the reader spends longer reading, lower comprehension is the end result.

Early readers, making the greatest progress, not only read faster and more accurately but also with better phrasing and intonation. Highest-progress readers read in five to seven word phrases, and self-correct four and five times as many of their word pronunciation errors as low-progress readers (Clay & Imlach, 1971).

Reading fluency requires automatic information processing, and repeated reading of a text with limited interruptions (if any), is a particularly effective way to foster more fluent reading (Samuels, Schermer, &

Reinking, 1992). Providing children access to appropriately leveled texts, and a non-interruptive reading environment, typically produces profound changes in reading fluency and self-monitoring.

Engaging in thinking about the ideas, images, emotions, characters, concepts, plot lines and themes in texts requires considerable cognitive effort and substantial mental activity space. When a reader struggles with word-by-word reading, having difficulty reading the sentences in phrases, it isn't surprising that little in the way of higher-order literacy performance is evident. Demonstrations of the higher-order literacy proficiencies seem more likely if the material is read accurately, fluently, and with reasonable recall. Working to develop fluent reading is important for fostering more thoughtful literacy performances (Allington, 2002).

### **C. Comprehension**

- **Concept Imagery**

Concept imagery is the brain's ability to image basic concepts and the whole from what is read, heard or experienced. Concept imagery underlies the ability to acquire vocabulary and comprehend oral and written language, problem-solve, and think critically and creatively. With well-developed concept imagery, people can perform higher order thinking skills: main ideas, making inferences, drawing conclusions, predicting ...

- **Vocabulary Development**

An analysis of research provides a strong case for systematic instruction in vocabulary at virtually every grade. Students must learn the new words in context, more than once to learn them. Direct instruction on words that are critical to new content produces the most powerful learning. Stahl and Faribanks (1986) showed that achievement and understanding are greatly increased when vocabulary instruction focuses on specific words that are important to what the students are learning. Powell (1980) found that instructional techniques employing the use of imagery produced achievement gains that were substantially higher than techniques that focused on having students generate novel sentences. A powerful way to teach new terms and phrases is to use an instructional sequence that allows for multiple exposures to words, in multiple ways (Marzano, Pickering, and Pollock, 2001).

- **Comprehension Strategies used by Proficient Readers**

We are seeing reading as a complex, recursive, thinking process that involves the integrated development of listening, speaking, reading, writing, viewing and representing across all disciplines and all ages. We have summarized strategies used by proficient readers from a strong body of research (Allington, 2002; Fielding and Pearson, 1994; Ogle, 1986; Harvey and Goudvis, 1999; Levine, 2002, 2001; Lyon, 1988; Braunger and Lewis, 1997; Anderson and Pearson, 1984; McCabe and Peterson, 1991; Nagy, 1988; Tierney and Cunningham, 1984; Pressley, 2002, 1998; Worthington, 2003; Siegel, 1999. As we plan learning sequences we structure learning processes to deliberately develop confidence and competence with key comprehension strategies:

- Using existing knowledge to make sense of text
- Making connections between information and that which is known
- Asking questions about the text before, during and after reading
- Creating images of the text
- Drawing inferences from the text before, during and after reading
- Determining what is important (saliency)
- Synthesizing information to create meaning before, during and after reading
- Monitoring and repairing comprehension throughout the reading process
- Talking through understandings
- Reflecting on tasks, thinking and on specific strategies or skills
- Goal-setting to develop and monitor achievement

Cognitive and metacognitive strategies have been shown to significantly effect academic achievement (Wang, Haertel, and Walberg, 1994). West, Framer and Wolff (1991) provided an

overview of major cognitive strategies, which offer a framework for processing different kinds of information:

1. **Advance organizers** help pupils build connections for new learning;
2. **Chunking procedures** invite pupils to categorize, sort, and organize information, identify what is important, articulate why it is important and make connections before they head into the processing of new information;
3. **Frames** for spatially organizing and processing information invite pupils to interact with the content and personalize the learning;
4. **Concept maps** help pupils reveal structural patterns in material and help pupils develop a 'big picture' and generate new connections among items of information and concepts;
5. **Metaphor strategies (analogy and simile)** help pupils transpose meaning from a familiar or previously learned idea, concept, procedure, or event to a new or less familiar one;
6. **Rehearsal strategies** offer pupils opportunities to think, write/sketch, listen and talk through their understandings as they work with different aspects of a learning task;
7. **Imagery strategies** help pupils represent, store, and recall information in different ways;
8. **Mnemonic devices** aid recall of information (pp.54-72).

All of the comprehension strategies develop skill with one or more of the cognitive and metacognitive strategies. We see the systematic and explicit teaching of a repertoire of cognitive and metacognitive strategies as one way to enhance comprehension, and to develop more sophisticated literacies in all learners. Over time students gain skill and flexibility with the processes, and they will develop a tool-kit of favourites to use independently to inspire all kinds of learning.

- **The Development of Thoughtful Literacy**

The new international and national standards for proficient reading require that students think about what they read, explain or describe their thinking. These new 'thoughtful literacies' are moving closer to proficiencies that mark a person as literate. Demonstrations of thoughtful literacy require readers to be able to consider, discuss and talk about their understandings of text, and also about the various processes of reading. Classroom talk around a range of texts is critical to becoming thoughtfully literate. Students need many opportunities to interact with text, with partners, with ideas presented to the whole class - explaining connections, summarizing, synthesizing, analyzing and evaluating ideas. Curriculum focused on promoting more thoughtful lessons produced not only better comprehension achievement, but also equal or better skills achievement than curriculum that emphasizes mastery of isolated skills (Dole, Brown & Trathen, 1996; Knapp, 1995; Pressley, 1990; Purcell-Gates, McIntyre & Freppon, 1995). Effective reading instruction includes moving from an emphasis on workbooks, which show no positive relationship to reading achievement, to lessons that offer more extensive reading and writing activities (Allington, 2002). To be literate readers must understand, use and reflect on written text to achieve their goals, and to develop their knowledge and potential (OECD/PISA, 1999). Constructing meaning requires far more than literal comprehension.

#### **D. The Reciprocal Relationship Between Reading and Writing Proficiencies**

We know that writing leads to improved reading achievement, reading leads to better writing performance and combined instruction leads to a higher level of thinking than when either process is taught alone (Braunger & Lewis, 1997). Research is suggesting a daily thirty to forty-five minute standard for volume of writing (Allington, 2002). About two hours of every day would be allocated to reading and writing because of the proven reciprocal relationship between reading and writing opportunities and proficiencies, particularly the links between comprehension and composing (Tierney & Shanahan, 1984). Through the Learning for Success project research (Close, McClaren and Stickley, 2002); and through the work of the School District #40, New Westminster District Research teams (2001-2004) we have learned that integrating reading and writing leads to stronger achievement in both reading and writing. Thinking with text, using a range of learning strategies and structured partner talk, leads to significant gains in reading and response.

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# SMART

BETTER TOOLS. BETTER LEARNING.

# READING

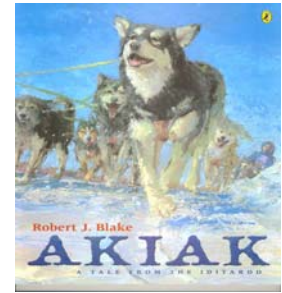
**Skill focus:** oral language, viewing, analysis, saliency, synthesis, and writing from a perspective

**Assessment:** Reading Assessment (RAR): identified categories on the District Performance Standards categories

**Text:** Akiak

By Robert J. Blake

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## Preparation

- **Decide how you are going to establish A/B partners**
- Often teachers tie the way students decide A/B partners to the comprehension skill being developed in the sequence. In this sequence the students will be **thinking like photographers**, so you might challenge the students to think of ways a photographer might use to decide partners (see step one below). Following their discussions and negotiations (2-3 minutes) invite the pairs to share how they determined the A/B, and to share their reasoning. Hearing the thinking will fuel the goal setting.
- **Have copies of the text, and pictures selected for the Partner Picture Talk ready.**
- Have copies of the **coaching cards** run off for each pair of students.

## Before Reading – Connecting with the Text

### 1. Step One: Setting Goals for the Sequence

#### Develop criteria for thinking like a photographer

##### An example of teacher talk:

*Over the next few days we are going to think like photographers, like poets, like reporters, and like participants experiencing an important race. This journey took everyone ten days to reach the finishing line. To begin with let's talk about thinking like a photographer. What would be important to a photographer working to capture important events as an observer during an important dogsled race? (Make a list on the board)*

##### An example of a list developed with a group of students:

- Telling stories with images
- Show important ideas in images
- Capturing important actions
- Including details that hook viewers
- Capturing feelings, expressions, stresses, exciting moments
- Using light and shadow
- Including details in the foreground, in the background
- Including sounds
- Showing textures
- Contrasts, angles, lines
- Colours, shading, tones
- Capturing thinking and communication

Reveal the set of coaching cards and compare the categories to the list generated by the class.

Invite students to set goals for their work today.

**An example of teacher talk:**

*Our goal is to think like photographers today. What would you like to see in the ideas and sketches you are going to generate as we work with the first part of the story? Jot your ideas down on your paper.*

After a few minutes invite partner A to explain his or her goals. Task partner B to listen for differences in the thinking and to be ready to report those differences to the class.

**2. Step Two: Accessing Prior Knowledge**

Invite the students to show what they know about the topic they are going to study for the next few days.

**An example of teacher talk:**

*We are going to set ourselves right at the scene of an important winter dogsled race set in Alaska. The book shows the ten-day journey of one team led by the lead dog, Akiak. Think for a minute about what you know about dogsled races, winter in Alaska, about lead dogs...Jot down your ideas in pictures or in words on your sheet.*

After two or three minutes invite partner B to share his or her knowledge, and partner A to listen for similarities and differences. Reverse roles. Invite students to share orally what they know.

**3. Step Three: Predicting/Generating Hypotheses**

**Strategy: Partner Picture Talk.**

**An example of teacher talk:**

*Part of our work today we will be to develop our picturing skills, visual thinking skills that are very important to photographers. We will use a process called, **Partner Picture Talk** to deeply view two pictures that frame the first day of the race, then you and your partner will go for a three minute **walk-to-talk** to develop a prediction you can share with the class.*

*I am going to show you the first picture, and both of you are going to think and talk about a story that might be going on in the picture.*

If you have a half or full class set of the text, invite the students to turn to the first selected picture. If you have only one text you could walk about showing the picture details to each pair, or you could prepare an overhead transparency and reveal the picture on the overhead projector.

**A. Reveal the First Picture**

- Invite partners to talk about the picture until you give them a signal to bring their conversations to a close.

- Invite partner A to turn away and to begin describing details of the first picture starting with:

**An example of student talk:**

*I'm picturing....*

- Encourage partner B to listen carefully. When partner A is finished, partner B coaches for more details by drawing from categories on the **coaching cards**.

**An example of student talk:**

*Tell me more about ... or you could say more about...*

- Invite partner A to turn back and **re-view** the first picture identifying what (s)he needed to picture more about or what (s)he didn't picture.

**An example of student talk:**

*I needed to picture more about ...or I didn't picture...*

This is a critical part of developing picturing or imaging skills and visual thinking.

**B. Reveal a Second Picture**

- Invite partners to talk about the story in the picture. This time invite them to give evidence or the reasoning behind their thinking (justification).
- Invite partner B to turn away and to begin describing the story in the picture. Partner A's task is to listen, with the coaching card categories in mind. When B finishes talking, partner A begins coaching.

**An example of student talk:**

*You could tell me more about ... or tell me more about...*

- Partner B re-views the picture saying, *I needed to picture more about...or I didn't picture...*

This is a critical step to always include. You might then invite the students to reflect orally on what they noticed as they turned back to re-view the picture they were describing. What they notice is always so interesting.

**C. Invite the students to stand and talk, or to walk-to-talk to generate a prediction****An example of teacher talk:**

*In a moment you and your partner will stand to generate a prediction based on the two pictures you have examined. You may walk and talk if that helps your thinking. You will have three or four minutes to create a prediction, your best guess of what you think will happen on day one of the race. One of you will explain your prediction and the other partner will explain why you think this will happen. You will need to use evidence from the pictures that you both viewed. Ask me questions before we begin.*

Sometimes teachers invite students to record and justify their predictions, especially if the skill focus is inference. Since this sequence is focusing on different skills, the predicting step will be done orally.

Give the students a signal to stand to begin generating their hypotheses.

After the allotted time (approximately 3-4 minutes) give the students a one-minute signal, and then invite the pairs to explain their predictions and their reasoning. This shouldn't be laborious. After hearing one set report out, invite the next set to offer differences in their predictions and in their evidence. At this point many teachers invite the students to write their own predictions, to be prepared to give evidence to support their hypothesis. Inviting students to share the predictions orally stimulates new thinking. Inviting students to share what they noticed about their thinking as they generated their predictions extends skill with the strategy and the effects of A/B partner talk.

**4. Step Four: Questioning Before Reading**

Invite the students to collaboratively generate questions, what they are wondering about, before they begin processing the first part of the text.

**An example of teacher talk:**

*Questioning is a wonderful way to deepen and extend our thinking. You know where the story takes place, and you have studied two watercolour paintings of day one of the race. What are you wondering right now? What would you like to ask a photographer or someone participating in the race? Talk with your partner for a few minutes before we hear questions from everyone.*

After hearing a sampling of the class' questions invite students to jot down two or three of their most important questions. (You might ask the students to explain why their questions are important.) Justifying develops reasoning.



the words, re-reading to choose words that capture the author's meaning develops analysis, synthesis and evaluation skills.

- Give the students newsprint and invite partners to work together to develop little poems that capture the essence of what the author is conveying. Listen to possibilities and as you work as a class to examine drafts.

**An example of teacher talk:**

*Do the words hold what the author is saying?*

*How else could we organize the words?*

*Are there any words you might like to repeat?*

*Are there other words, not in the story that you might like to add? What words best hold or capture what the author is saying?*

**As we listen to the poems ask yourself, “Do these words capture the author’s meaning, or what the author is saying?”**

- Invite individuals to create their own poems in the box beside their first drawings.

**D. The teacher and students read a second chunk of text.**

- After the reading students sketch like photographers capturing important images.
- Invite partner A to explain his or her images, and task partner B to notice and be able to explain what is the same and what is different in his or her partner's ideas.
- Invite partner B to explain his or her similarities and differences.
- Invite partner B to explain his or her ideas while partner A notices similarities and differences.
- Invite partners to work together identifying important words capturing the essence collaboratively – generating poems that hold the author's meaning.
- Listen to samples with the lens:

**An example of teacher talk:**

*Does this capture the author's meaning?*

**E. Invite the students to individually generate poems that capture the essence.**

**After the Reading – Transforming Understandings**

**6. Step Six: Transforming the Understandings**

**Strategy: Writing as an Insider to Show not Tell**

- A.** Invite students to step into the shoes of a photographer, a participant or observer who watched or took part in the race (musher, dog, photographer, reporter, friend, relative...)

**An example of teacher talk:**

*See yourself on day one of the race... (pause for 2-3 seconds to allow the generation of ideas)*

*Hear the sounds...*

*Feel the excitement...*

*Notice the people...the dogs...the light, the temperature*

*When I say, “Go,” begin writing to show what life is like at the beginning of this important race...*

- B.** As the students begin writing, move about. Invite students to read their beginnings.

**An example of teacher talk:**

*As I move about I am going to tap you on the shoulder and invite you to read your beginning. Hearing ideas is like a fuel pump for thinking. As you are writing feel free to cross out words and add new words. If you don't like your beginning, put an X and start again. Writers start, stop and then start again. Each time they get closer to what they really want to say.*

Following the writing invite the students to share what they noticed about their thinking and learning as they wrote like photographers.

**7. Step Seven: Invite students to identify new ideas, questions, and connections they have made today.**

- The ideas, questions and connections may be about thinking like a photographer, capturing the essence, writing in role, or about the content they have been studying – dogsled racing in Alaska. Have them explain their understandings with partner A explaining and partner B listening for similarities and differences.
- Reverse roles.

**8. Step Eight: Invite students to reflect on their own learning and identify what they noticed about their learning today.**

- Listen to a sampling of student responses or do a quick whip-around which each person offering something. They can pass, but the teacher returns to them at the end of the whip-around.

**9. Step Nine: Invite students to set new goals for the next time they think like photographers, poets capturing the essence, and reporters writing in role as insiders showing what life is like.**

- You may have time for a few reflections, and you might like to think aloud reflecting on what you noticed about the learning.

**Overnight**

- 1. Highlight powerful passages, phrases or words in the students' writing.**

**Day Two of the Sequence**

**1. Pass out writing from day one.**

- In A/B partners invite the students to talk about why they think the teacher highlighted the particular parts in the writing.
- Invite students to listen to a sampling of highlighted passages. Revisit the criteria for thinking a photographer, identifying why the various passages may have been selected. Develop a T-Square to guide the goal setting.
- Invite the students to set a new goal for day two of their work with the race.

- 2. Repeat the same sequence as in day one, perhaps processing more than one day of the race.**

## At the End of the Sequence

1. Invite the students to choose their favourite day and to write like a participant capturing the images, feelings and ideas of that day. Take this last write through to publication.
  - Some teachers invite the students to scan through the story and do one last found poem, **Capturing the Essence** of the whole journey.

# Appendix D: The SmartReading System



## Lenses on SmartLearning

- standing on the shoulders of research

<b>6 Ts of Effective Reading Instruction</b> <ul style="list-style-type: none"> <li><b>Time</b> <ul style="list-style-type: none"> <li>extensive reading and writing</li> <li>90-120 minutes of eyes on, minds on, voices on, and hands on text</li> </ul> </li> <li><b>Texts</b> <ul style="list-style-type: none"> <li>more high-success than difficult reading</li> </ul> </li> <li><b>Teaching</b> <ul style="list-style-type: none"> <li>cognitive and metacognitive strategies</li> </ul> </li> <li><b>Talk</b> <ul style="list-style-type: none"> <li>structured invitations to articulate and extend understandings</li> </ul> </li> <li><b>Tasks</b> <ul style="list-style-type: none"> <li>challenging, open-ended high inference tasks</li> </ul> </li> <li><b>Aligning testing and teaching</b> <ul style="list-style-type: none"> <li>assessment data guides planning and teaching</li> <li>includes self-assessment and goal-setting</li> </ul> </li> </ul> <p><small>Allyn, 2002</small></p>	<b>Principles of Learning</b> <ul style="list-style-type: none"> <li><b>Active Learning</b> <ul style="list-style-type: none"> <li>engagement in explicit and complex tasks</li> <li>structured assessment, reflection and feedback</li> <li>goal-setting in light of new understanding</li> </ul> </li> <li><b>Collaborative Learning</b> <ul style="list-style-type: none"> <li>reflection on partner and group interactions</li> <li>goal-setting and planning</li> </ul> </li> <li><b>Leamer Responsibility</b> <ul style="list-style-type: none"> <li>looking for what works, incorporating new understandings into the setting of new goals</li> </ul> </li> <li><b>Learning about Learning</b> <ul style="list-style-type: none"> <li>students examine and reflect upon the process(es) of learning</li> </ul> </li> </ul> <p><small>Black and Williams, 1998; Walkins, Ginnel, Lodge and Whalley, 2002</small></p>	<b>Putting the Brain in the Frame</b> <ul style="list-style-type: none"> <li>challenging task(s)</li> <li>emotional hook</li> <li>positive, encouraging environment</li> <li>active engagement</li> <li>multi-sensory processing, rich in language</li> <li>social interaction</li> <li>pleasurable intensity, free of undue pressure</li> <li>choice</li> <li>movement</li> <li>time to reflect, assess, refine, revise</li> </ul> <p><small>Hakel, 2002 Riley, 2001 Slight, 1999 Diamond, 1994 Bywater, 1998</small></p>	<b>Metacognitive Skills</b> <ul style="list-style-type: none"> <li>connecting new information to former knowledge</li> <li>analyzing and reflecting on tasks</li> <li>monitoring own learning</li> <li>making adjustments and revising the learning</li> <li>reflecting on one's own thinking or others' thinking</li> <li>reflecting on strategy or learning process</li> <li>setting goals for new learning</li> </ul> <p><small>McClaren, 2001 Baker, 1998 Ertmer &amp; Newby, 1996</small></p>
<b>Cognitive Strategies</b> <ul style="list-style-type: none"> <li>advance organizers</li> <li>chunking</li> <li>concept maps</li> <li>frames</li> <li>imagery</li> <li>metaphor</li> <li>mnemonics</li> <li>rehearsal</li> </ul> <p><small>West, Farmer, Wolf, 1991</small></p>	<b>Neuro Developmental Systems</b> <p>Developing:</p> <ul style="list-style-type: none"> <li>attention</li> <li>sequential ordering</li> <li>spatial ordering</li> <li>memory</li> <li>language</li> <li>motor function</li> <li>social thinking</li> <li>higher order thinking</li> </ul> <p><small>Levine, 2002</small></p>	<b>Complex Reasoning</b> <ul style="list-style-type: none"> <li>classification</li> <li>comparison</li> <li>prediction/ hypothesizing</li> <li>constructing a position</li> <li>decision making</li> <li>drawing conclusions</li> <li>error analysis</li> <li>extending</li> <li>Inquiry through experimentation</li> <li>Invention</li> <li>problem-solving</li> <li>structural analysis</li> <li>synthesis</li> <li>systems analysis</li> </ul> <p><small>Marras, 1992</small></p>	<b>Developing The Brain's Natural Learning Systems</b> <p>The Brain's Natural Learning Systems</p> <ul style="list-style-type: none"> <li>self-empowered learning</li> <li>collaborative learning</li> <li>strategic learning</li> <li>active learning</li> <li>reflective learning</li> </ul> <p><small>Given, 2002; Goleman, 1995</small></p>

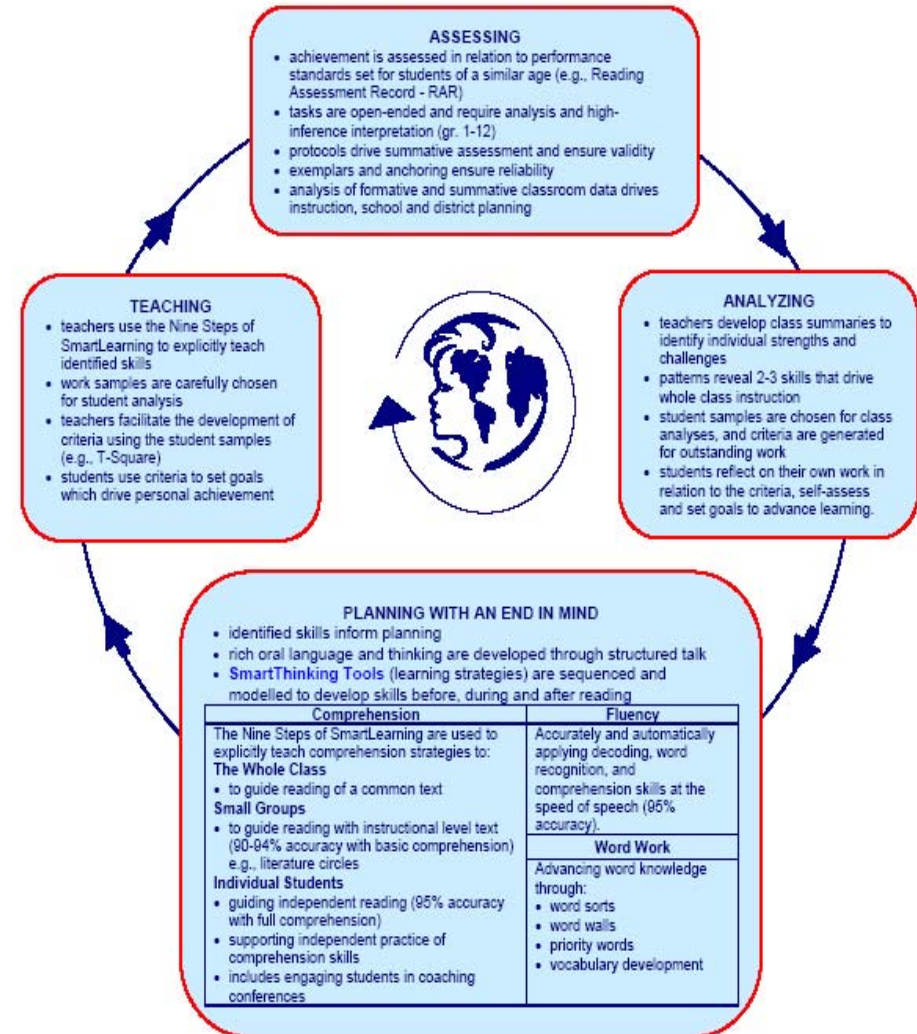


- SmartLearning is a highly motivating system designed to equip students with better tools for learning, tools that enable them to reach higher levels of achievement.
- Over time, through cycles of SmartLearning in respectful brain-friendly communities, students become thoughtful, self-regulated achievers.
- In relatively short periods of time, students stretch their capabilities and become more able thinkers, viewers, speakers, listeners, readers and writers.



### THE LEARNING CYCLE

- Includes assessment of, for and as learning



*Motivation is kindled as students gain confidence through competence – reading and responding to increasingly more sophisticated texts.*

*Students learn to read and write most proficiently and quickly when comprehension, fluency, word work, writing, and representing skills are integrated, and taught systematically and explicitly.*

## SmartReading is ...

- a comprehensive balanced approach to literacy that crosses all areas of the curriculum (K-12)
- a step-by-step system that boosts thinking, sharpens minds and advances everyone's speaking, viewing, listening, reading, writing, and representing
- designed to increase fluency and comprehension, and to instill a love of learning in all students

### The SmartReading System:

- is a framework that uses the **Nine Steps of SmartLearning**, with structured talk, to advance achievement
- includes systematic and explicit modelling, guided practice and independent application of SmartThinking Tools – learning strategies designed to develop comprehension skills, fluency, word work and expression
- uses a planning cycle driven by **assessment of, for and as learning**, and grade-specific performance standards
- is informed by action research and empirical data
- stands on, and is continually informed by, a **foundation of research: literacy, assessment, learning, neuroscience, staff development**
- invites learners to think with text to construct, express, extend and demonstrate understanding before, during and after listening, reading, and viewing text (print, media, experience).

