Planning with confidence, skills & competencies for deeper learning in mind

Two lessons in a sequence: *You have a very smart brain!*

- Getting started with *SmartLearning* through a focus on the brain and learning – using the Thinking Log process with a read-aloud
- Showing how slowing down to process text develops learner agency and competencies for deeper learning.

Timing: 60-90 minutes for each lesson... adjusted depending on the age of the learners and the time available

Coaching point: Since this first lesson builds background knowledge around the amazing power of the human brain as a connecting focus and starts to develop *SmartLearning* routines, allow 80-90 minutes for each lesson. You will want to take the work to writing, so you might decide to read and process only one or two chunks of the text at first. Less is more as you get started with the processes. Once you get into the novel or short story (a story you love to read to learners of this age), you may have time to read and process two or three chunks of the text before taking the thinking into writing. Always stop at strategic times to invite learners to share what they are noticing about their thinking.

Resources:

- **Learners in partners**
  A/B partner-talk helps students develop self-talk about their learning. With practice, the external conversations students have with a partner helps form pathways in the brain to carry on such conversations internally and helps them become self-aware, metacognitive learners (Berk, 1994).

Coaching Points:
When structured **A/B Partner-talk** is new for learners, we partner learners based on who we think will work best together - at this point in time. With current circumstances in mind, we pair people. Our goal over time is to enable everyone to work with anyone in the class for short periods of time. We want learners to feel the power of developing their own thinking, talking through ideas with a partner, developing the courage to report-out partner-thinking, and refining their thinking based on hearing the distributed thinking. As learners notice their thinking being acknowledged and valued, their beliefs in the own capabilities grow. Together they are growing smarter, and they know it. The power and safety of A/B partner-work allows hesitance to drift away. Learners are freed to express and extend understandings, orally, visually and in writing.

We know this can be tricky at first. Sometimes a class is not yet able to work in partners. When this is the case, we invite them to sketch something on their paper and to be prepared to share something on their page when we open the **ZIPPER.** Starting at one place in the room, I walk to a desk or place if they are at tables and invite them each to say something they captured in their sketch. If they are not ready, I invite them to listen as we hear others' ideas, and to be prepared to say something in their own words when I come back to them. This action shows that everyone's ideas are valued and gives them an opportunity to take ownership, and to sense their voice matters in the community.

When partnering, we carefully protect vulnerable learners by placing them in groups of three - with two As and a B, or two Bs and an A. They are partnered with people known for their flexibility and gentle natures. Through the work, hesitant or non-verbal learners become 'awash' with language when their partners express and report-out thinking. We have seen reluctant speakers surprise everyone by offering an important point or a poignant perspective. Once the rhythm of A⟷B partner-work is in motion, learners feel the power of developing their own ideas, talking through ideas with a partner, reporting-out partner thinking, and learning from distributed ideas. To add novelty and a distance from normal life, we often invite learners to think and respond in role as a character, observer, or expert on the scene in the story.
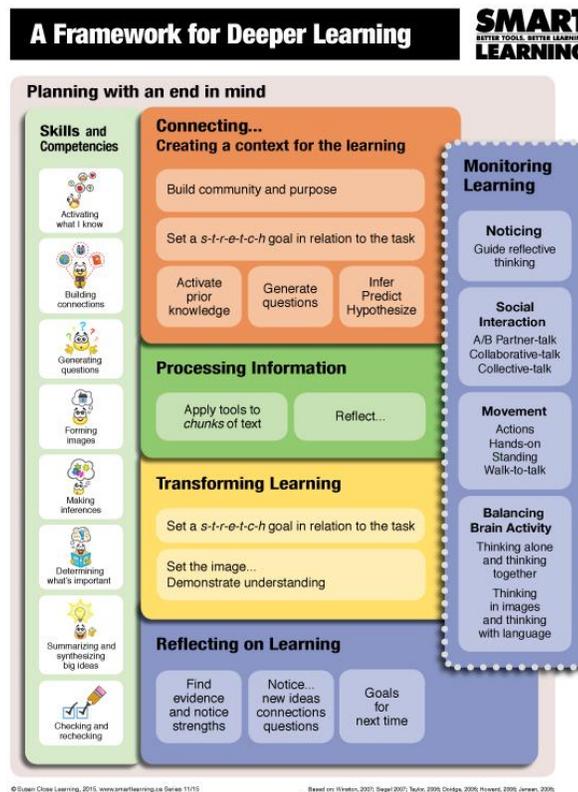
> *When we engage learners in authentic roles, they grow to see themselves not as outsiders looking in on a subject but members living it. They actually engage in the thinking and key processes in a real way… playing the whole game, even if at times it is a junior version… In this way, using the language of identity in the classroom signals to students that they need to activate certain applicable ways of thinking* (Perkins, 2009; Ritchhart, 2015).

See *Guidelines for Structured-talk* for a discussion about setting up and guiding partner interaction (www.smartlearning.ca).

- Images of the brain: in the PowerPoint provided
- A read-aloud story to process – a story you love to use with this age group
- *Idea-sketch•tagline* **response sheet** (included)

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- Coaching cards (icons are embedded in the response sheet). You can order the 9X12 versions at www.smartlearning.ca.
- **A chart paper to begin developing criteria for Powerful Images**
- **A chart for A↔B sending and coaching images:**

  A: *I'm picturing...*
  B: *You could say more about...*
  B: *I noticed I pictured...*
  B: *I noticed I could picture more about...*

- A sound you will use to bring the students into focus: a tone bell, a drum roll, a rain stick - a sound that reverberates for 3-5 seconds, or use your voice and say, '5', which means you have 3-5 seconds to finish what you are doing.

  Coaching point: we usually invite partners to talk and then use 'a sound, or say the number 5', to catch their attention. We tell them the brain takes 3-5 seconds to shift from talking to listening; when they hear the sound, finish their talking then turn their attention to the teacher. Often, we model bringing our finger and thumb tips together. We explain that when they touch the tips together, they are making a full electrical circuit in the brain. We call this action, 'Touch-points' and invite them to use 'touch-points' to show they are in full-focus. This is the start of building metacognitive awareness and skill. The 3-5 seconds of time gives everyone time to respectfully bring their conversation to a close.

- (Optional) **Two colours of pen or pencil:** one to use for initial thinking, one for new ideas that come into their thinking after hearing or seeing ideas in the class. This action works very well if you include a *Detective*-walk[2] after the *Idea-sketch*.

- Please note: All *SmartLearning* lessons follow the process outlined in the Framework for Deeper learning

End-task/s:	**End-task/s:**
Open-ended task learners demonstrate at the end of the sequence	After using the ***SmartLearning*** routines and processes with a read-aloud, write to show what you understand about the brain and your own learning.
	Daily tasks:
Role/s	1. Write in role as a character in the text to send an image of what is important and how you are feeling about the events in your life.
	2. Notice what makes a powerful image into your thinking.

Concept/s Skills & competencies to be developed	**Concept/s:** **Skills & competencies:** metacognitive awareness and skill: goal setting & reflection; image & idea development; analysis and saliency; summary/synthesis; communication: oral, visual, and written communication; interpretation
Focus for assessment	**A•S•K focus:** image & idea-development, synthesis & summary (Tagline), interpreting, setting a goal and reflecting to find evidence of meeting the goal **Oral language:** partner interaction: listening and speaking **T-charts:** What makes a powerful image in your brain?
Talk structures: to develop, distribute, and refine thinking: *A/B: reporting-out Walk to talk ZIPPER POPCORN*	**A/B-partners: G**eographic-way: the student closest to window will be A; the student closest to the door will b partner B.[1] **Frame/s for reporting**: *___ and I predict an important idea might be ___. We think this because ___.* See: *Guidelines for Structured-talk* (website) for a discussion.

<table>
<tr><td rowspan="2">The Thinking behind the planning

Resources & Materials
response sheet with icons
a read-aloud story for Gr.3-6, one you know learners will love
a set of five sentences, from the first chapter, printed on a chart paper in the order that they appear in the story – with the chart rolled up, so sentences can be revealed one at-a-time</td><td><div align="center">Lesson 1</div>

Today's tasks:
- Notice what comes into your thinking as you listen to a story.
- Begin thinking about what makes a powerful picture or image in your brain.
- Sketch and talk to send an image, write as a character to send an image that shows what is important, and how you are feeling about life at this moment in time.

The thinking behind the first lesson:
This lesson sets up ***SmartLearning practices and routines.*** We often use the approach to set routines for independent reading – the *SmartLearning* way. *Right from the start* we want learners to know that their brains have incredible power. We want them to understand that every time they make a connection, notice a new idea coming into their thinking, and wonder about something, they are growing brainpower. We want to hear them saying, *'I have a very smart brain."* We want them to know that the tasks we give them are designed to grow their thinking, and to build their skills and competencies. We want them to set goals and to see evidence of meeting their goals in their learning. Through talk about the brain and what they are noticing about their own learning, they will be preparing to explain what they know about the brain and learning at the end of the set of read-aloud learning experiences.

A few findings:
One new and powerful idea is to teach students about the brain itself, gaining insight into the neural underpinnings of their lives. When students learn to understand their own brains, they are equipped to take responsibility for their own learning (Siegel, 2013; Dweck, 2006).

Short explanations about how a learning a process or activity will change and grow their brains stimulates enjoyment in learning more about their own personal brains and generates more interest in learning (Willis, 2009).

We learn best with focused attention. As we focus on what we are learning, the brain maps that information on what we already know, making neural connections.
Goleman, 2013; Slaghter, 2009

Right from the start we want learners to know how smart the human brain is, and how the learning process itself and the processes they will be using, called ***SmartLearning tools,*** help them to grow smarter. We often refer to a slide like the one below to show learners the incredible power in one human brain. Sometimes they look at you in disbelief as they hear the information. Just imagine the kind of power being harnessed as we all work together, every day.</td></tr>
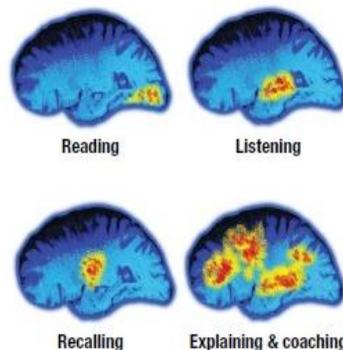</table>

The most powerful computer known to man is the human brain. The brain possesses about 100 billion neurons with roughly 1 quadrillion (1 million billion) connections known as synapses wiring these cells together and has a memory capacity of approximately 2.5 petabytes (or 2.5 million gigabytes). To put that in perspective, it took the 4th most powerful supercomputer (82,944 processors) in the world, 40 minutes to complete a simulation of one second of human brain activity. What can we do with this???

We introduce a poster that shows the kind of brain activity stimulated when we read, listen, recall & talk about information. We invite them to talk with a partner about what they notice in the slide.
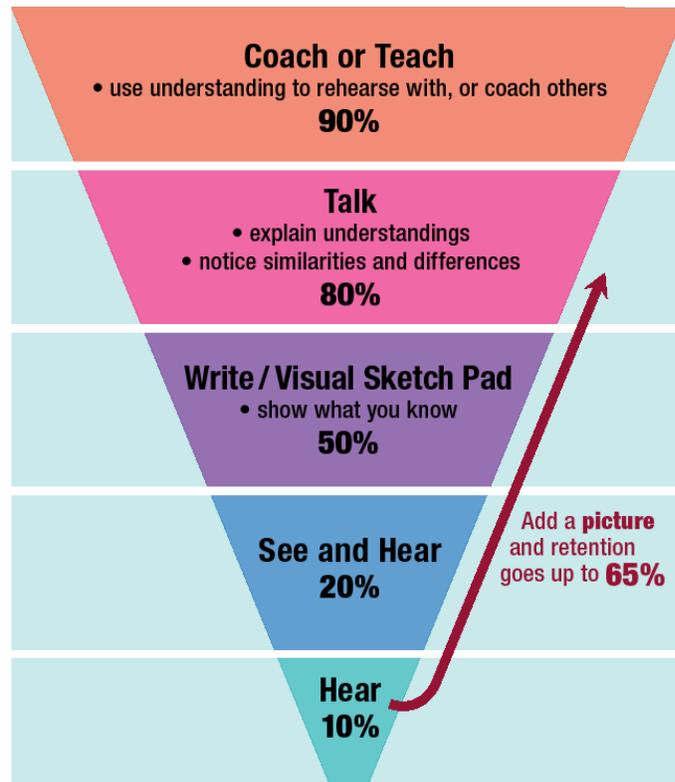
Talking develops and extends thinking; when you hear other people's ideas, your thinking is polished against theirs. Your thinking is clarified, refined, and extended. Everyone gets smarter through the work.

Brain Activity

Reading   Listening
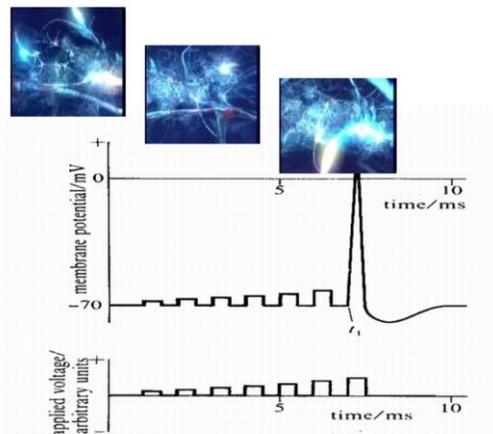
Recalling   Explaining & coaching

At some point, we show them the inverted triangle and briefly show why talk is so important for remembering important ideas. We sometimes use the dollar or a Loonie to build their understanding of how multiple ways of processing leads to deeper understanding and retention of big ideas. After hearing something, the next day you remember only about ten cents worth of the thinking. If you add a picture, sketch, and write to develop understanding, talk to someone about the ideas, and coach or teach something to others, you remember so much more.

Concept retention... 24 hours later

Coach or Teach
• use understanding to rehearse with, or coach others
90%

Talk
• explain understandings
• notice similarities and differences
80%

Write / Visual Sketch Pad
• show what you know
50%

See and Hear
20%

Hear
10%

Add a **picture** and retention goes up to **65%**

Susan Greenfield (2017) gave us permission to show learners what neurons look like when they cluster as people focus on their work over time:
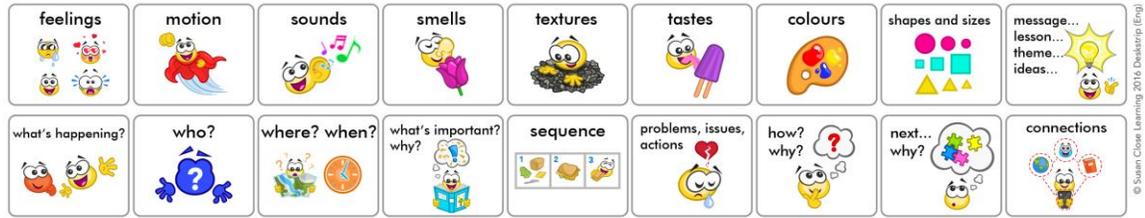

There is a marvelous 'live look' at neurons communicating at:
https://www.facebook.com/712078464/posts/10156756110738465?s=892625057&v=i&sfns=mo

We want learners to understand that they have billions of neurons in their brains, 80-100 billion or so, and that certain neurons are activated throughout the brain when we focus on a task, a question or challenge.

We explain that each icon represents important work clusters of neurons do.

The character on the coaching card is 'Neuri the neuron', named by a team of Gr.12s. The students said everything in Gr.12 feels hard; seeing the little icon on their pages makes the brainwork feel easier. The name stuck.

Some findings you might share with learners as the lessons unfold:
Taking on the perspective & feelings of others is one of the most profound contributors to deep reading. Empathy involves a whole feeling-thinking network that connects vision, language, and cognition with extensive subcortical networks (Wolf, 2018).

When we engage learners in authentic roles, they grow to see themselves not as outsiders looking in on a subject but members living it. They actually engage in the thinking and key processes in a real way… playing the whole game, even if at times it is a junior version…. In this way, using the language of identity in the classroom signals to students that they need to activate certain applicable ways of thinking (Perkins, 2009; Ritchhart, 2015).

Imagery is an important deep reading process. *We want learners to construct images out of carefully chosen sensory details conveyed only by words (Wolf, 2018).*

Getting started...
- Learners are in partners, side-to-side, socially distanced.

Connecting:

Hand out the response sheet (included)

Set the tasks – lessons sequence end-tasks and the task for lesson one.

An example of teacher-talk:
Look at the picture of hands holding a brain. I am going to read the words under the picture. Notice what comes into your thinking as I read the words...

The most powerful computer known to man is the human brain. The brain possesses about 100 billion neurons with roughly 1 quadrillion (1 million billion) connections known as synapses wiring these cells together and has a memory capacity of approximately 2.5 petabytes (or 2.5 million gigabytes). To put that in perspective, it took the 4th most powerful supercomputer (82,944 processors) in the world, 40 minutes to complete a simulation of one second of human brain activity. What can we do with this???

Isn't that incredible information about the power in a human brain!! In this sequence of lessons, we are going to use a read-aloud and some new processes to show you how your brain maps ideas and stores information. As the lessons unfold, I want you to notice what makes a powerful image or picture in your thinking. At the end of the sequence you will write to show what you know about your brain and your own learning. Through the work you will develop metacognitive skill which is a key to deeper learning and higher achievement. Metacognitive skill means you are able to set goals, think about your thinking, and direct and adjust your learning to achieve your goals. You will also think like a character to explain an important idea or message in the story.

I have chosen an old novel written by a Nova Scotian writer, a story that over the years has been a favourite of students your age. Your task at the end will be to write as the character to send an image of what life is like for an eastern coyote.

Building Community

Setting the purpose
Task... role/s

Developing criteria
for the learning

Using criteria
to set *s-t-r-e-t-c-h* goals

Using Tool/s: to activate prior knowledge & make connections, generate questions; develop prediction/hypotheses…

Reflecting on learning

For the first lesson you will think like the character ___ (For *Nell, the adventures of a Coyote*, they will think like the mother coyote) *and both sketch and write to send an image of what is important and how you are feeling about it.*

I chose some SmartLearning processes to help us tap into what we already know, to make connections, and to build some background information, before we work with the story. As we use the first process, called **Gap Analysis***, notice what makes a powerful image in your thinking.*

Let's get started. I have chosen five sentences from the passage we are going to read today. They are in the order that they appear in the story. As I unfold the first one and read it to you, notice what comes into your thinking…

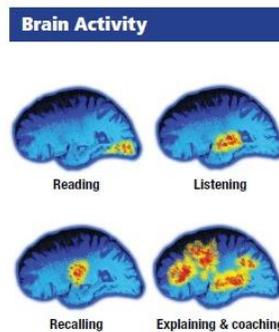### Unfold the chart revealing the first sentence.

Teacher-talk continues…
Listen as I read the line to you… Notice what is coming into your thinking… I will read the next sentence. As I read it to you notice something new coming into your thinking. Jump into the gap between the two lines and start thinking what might be important; notice the feelings and the images coming into your thinking.

Read both sentences again; invite partners to stand and talk about what they see in their thinking. Tell them after sitting for 15 minutes, standing resets the brain (Mercola, 2015). Reveal the next sentence, invite partners to talk again about what seems to be important… Reveal the next sentence… invite partner-talk. Then reveal the last sentence. Invite partners to stand and talk about what life might be like for the mother coyote, given the words they have read and talked about.

Introduce the Brain Activity poster.

Now look at this poster of brain activity. This is a drawing made by a medical illustrator showing where your brain is working hard when you are reading... listening... recalling something... and when you are talking to explain or coach someone to do something. You have been doing all four kinds of brain activity. When you talk you actually clarify your thinking, and as you are speaking you make new connections and extend your thinking.

Brain Activity

Reading   Listening

Recalling   Explaining & coaching

Present a reporting frame: ___ *and I think life for the mother coyote might be ___. We think this because ___.*

Now, I am going to ask you and your partner to rehearse what you think life will be like for the mother coyote, given these five sentences.

Rehearsal is one of eight cognitive processes (West, Framer and Wolfe, 1991). When you rehearse with a frame, you exercise the motoric function in the brain (Doidge, 2015), and you prepare to report-out your combined thinking. When we hear your ideas, we get to polish and extend everyone's thinking.

Signal to bring learners back to listening. Use the number '5' which means you have 3-5 seconds to finish your talking and to turn your focus to the teacher. We like to model **'Touch-points'**, as a way to show they are in full-focus - finger & thumb tips touching. I like to tell learners that the brain takes 3-5 seconds to change channels from speaking to listening... and that when they hear the sound, they are to respectfully finish their talking or what they are doing, and turn their focus to me.

When they bring their finger and thumb tips together, they are making a full electrical circuit. When they show me 'touch-points' I know they are giving me their full attention. Their brains are in full focus.
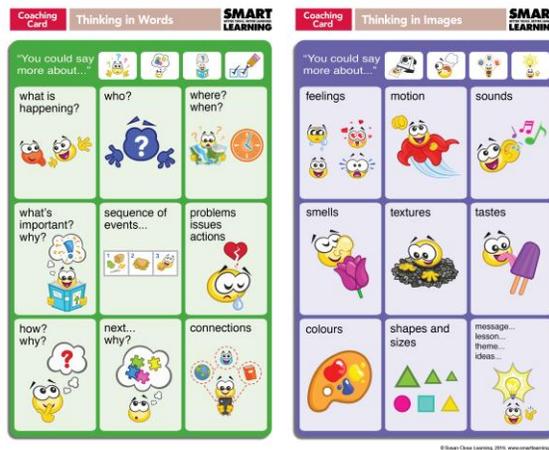

Model A/B partner-talk.
When we are doing this for the first time, I usually use *a geographic way* to decide who will be A and who will be B. I invite the person closest to the door to be partner A, and the person closest to the window or the teacher's desk to be partner B. I flip a coin or use dice to determine which partner will report-out. Then I give them time again to rehearse what they will say, with one partner practicing as the other coaches. We look back at the brain activity chart to notice how much of the brain is being used when we talk through our thinking. Then, I invite all the partners who will report-out to stand, and we hear each team's thinking. After learners are comfortable with the A/B reporting, we hear one team's ideas, then hear ideas that are different.
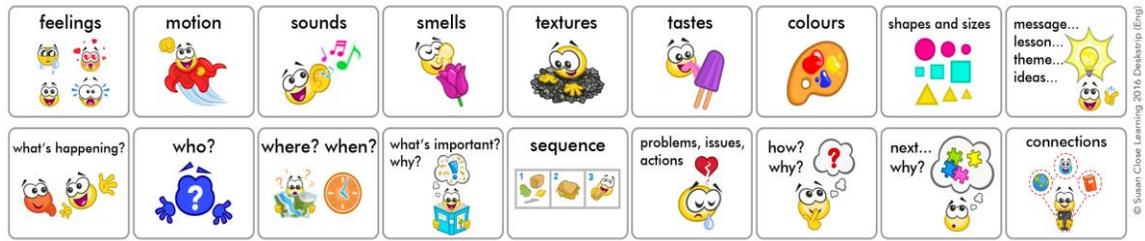
Invite learners to turn to their papers.
In the first box, they generate what they know about the life of the mother coyote. They generate what they predict life will be like… and they generate questions they have about the life of an eastern coyote. Once the questions are shaping, invite learners to share their questions. We often do a *ZIPPER*, by starting at one point in the room and zipping around hearing what learners are wondering. The questioning stimulates more thinking and surrounds the learners with a canopy of ideas.

Introduce goal setting.
At this point I love to introduce the coaching card icons. I might use the poster or the 9X12 cardstock versions:

or I might refer to the strip of icons at the top of the paper on their response sheet:

An example of teacher-talk:
You have 100 billion neurons, each with important work to do. Look at the strip at the top of your page. Those little pictures represent some of the work that your neurons do. The little creature is named, Neuri, and got its name from a team of Gr.12s. As I read to you today, you will notice your neurons working. You might notice feelings... motion or action in the story... sounds... scents... textures... tastes... colours... shapes, sizes... important ideas. You might notice a message coming from the words, something the author wants you to understand. For sure you will notice what is happening... who is in the story... where and when it is happening... problems... and you will make lots of connections to everything you know.

Setting goals:

An example of teacher-talk:
For your goal today *I want you to circle the what's important and why icon, and the feelings icon. An icon is just a picture that represents something. Please choose another icon that you would like to listen for, one that will help you make powerful images or pictures in your thinking. When we finish this work today, you will go back into your sketching and writing to find evidence of meeting the goal and of listening with the icon you chose in mind. Let's get started with noticing and building our brainpower.*
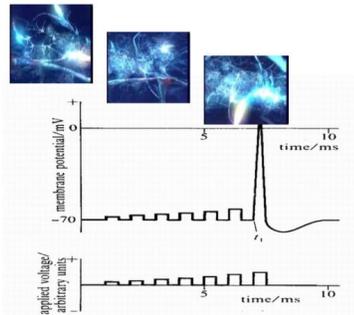

Texts*: processed in chunks* ***Tools:*** *Learners think with the text & use tools to develop skills & competencies* ***Reflecting on goals…*** *noticing learning*	## Processing: Invite learners to see what neurons look like when you focus over time. With tasks and goals in mind, over time neurons cluster into dense networks. 1. **Tools:** *Set the Image•Idea-sketch•Tagline, Detective-walk, and A/B partner-talk to send* and *coach images* **An example of teacher-talk:** *I am going to read a passage to you. Your job is to let images of what's important & feelings come into your thinking. Notice when the icon you chose comes into your thinking... When I am finished reading, I will re-view what I read* (Set the image)*; then your job will be to sketch as a character and show what was important and why it was important, to show feelings that came into your thinking, and to add details that popped into your thinking...* **Read a short passage,** enough to develop a sense of what is important - a few paragraphs... invite the learners to listen; when you stop, set the image for them to sketch as a character to send an image onto the paper that shows what is important to remember... feelings... and the icon they chose as a goal.

An example of teacher-talk:
See yourself as the character... notice where you are... hear the sounds around you... notice any actions or movement... feel the air... notice the sizes... shapes... textures... colours... notice the thinking... any talking... notice what seems to be important... notice your feelings... when I count to three begin sketching to send an image of what's important and how you are feeling at this moment in time...1•2•3.

Sometimes I read the passage again as they are idea-sketching.

Coaching Points:
Drawing is its own form of thinking. Sketching to show understanding has the power to double reading comprehension (University of Waterloo, 2019).

Developing imagery while reading – followed by drawing – allows the learner to recall imagery and helps the student to express thinking with language (Bell, 2009).

By using drawing as a comprehension tool, we slow down and allow all students to use their mental constructs to help them develop images of the passage. Drawing may be what allows them to image text (Pressley, 2006; Bell, 1991; Manitone and Smead, 2003; Siegel, 2007).

Introduce the Detective-walk.

I invite learners to stand and look like a detective. I mention that detectives often like to walk-about with their hands behind their backs. This ensures they do not leave fingerprints. I invite them to do a walk-about in silence, noticing what is powerful in other idea-sketches. I tell them that changing elevation from sitting to standing resets the brain and walking actually helps to integrate their thinking. I invite them to observe carefully and tell them that observing others' thinking often sparks new thinking in their own brains.
I invite them to return to their own places and add details to their own sketches - using a different colour of pen or pencil. This shows learners how others' thinking, or a walking-break stimulates new thinking.

We know that a powerful form of elaboration is to discover a visual image for new material... and that showing understanding graphically and through key words promotes the learning of concepts and interrelationships. Reflection adds layers to learning and strengthening skills. (OECD, 2010; Brown, Roediger III, 2014)

2. Tool: Adding a Tagline to summarize or synthesize what is important in the idea-sketch

When the processing includes summarizing – orally and/or in writing – or the generating of a keyword gist, learners clear their working memories and develop metacognitive control... before moving on to learn new information. Reading comprehension increased by 50% when learners created 5-7word keyword gists following the reading of a passage (OECD, 2010).

An example of teacher-talk:
Now, look at your sketch... we call this an idea-sketch because you are capturing important ideas from the story. Now I want you to think like a reporter who needs to write only 5-7 words that capture what was important. The words you choose need to send a picture and a feeling that shows what was important in the story. We call this a putting a tagline on a picture. Your words need to send a clear image and a feeling of what is important. If I had read you a news story about flooding, my picture might be about people leaving. A tagline might be: Floodwaters rising people race to leave. Do you get a picture from those words? Do you get a feeling? Look at your picture. Come up with 5-7 words that send an image and a feeling.

As Taglines begin emerging, read them out-loud. Invite learners to notice if the words send an image and a feeling. This is such important work, work that has the power to deepen and magnify comprehension. At first the work may feel like walking through molasses. Some learners want to write sentence to retell. You want them to capture what was important by summarizing and synthesizing the ideas in only a few words. Examples that emerge in the class have the most power to influence everyone's thinking. After some experience, the task of generating taglines will come naturally.

Reflecting… noticing learning in relation to goals

You can use moments during the day to invite learners to analyze a situation and practice generating a tagline that sends an image and a feeling for what is important.

3. Tool: Sending and coaching images

Coaching point:
Have the chart paper labeled A↔B Sending & Coaching Images visible.

Model sending and coaching images using A↔B Partner-talk:
Invite a learner to be your partner to model sending and coaching images.

An example of teacher-talk (with the **A↔B Sending & Coaching images** chart visible)**:**
I have the coaching card icons in my hand (the ones at the top of their pages, an actual card or desk strip). *I am going to invite you to use words to send an image of everything that is important in your picture, into my thinking, without me looking at your picture. When you finish, I will use the coaching card icons to coach you to give me more information. I will choose an icon and say, "You could say more about ___." I will then look at the picture and tell you what I noticed I pictured as you were talking. I will look at your picture again and tell you what I could have pictured more about.*

Invite the learner to stand, socially distanced, beside you. Invite the learner to send the image developed during the Idea-sketch into your thinking using the first words on the chart:

- ***"I'm picturing ___".***

After listening, use the coaching card icons to prompt the student by saying,

- ***"You could say more about ___."***

When the coaching is finished, look at the students' idea-sketch and reflect using the words on the chart,

- ***"I noticed I pictured...***

Look at the student's idea-sketch again and reflect,

- ***"I noticed I could picture more about___."***

Thank the student for being your helper and reflect to explain the powerful images that came into your thinking.

On the board or on a chart begin a T-chart, listing criteria for what makes a powerful image on the board (strong words, feelings...), with an example from the student's work on the right.

Guide learners into A↔B sending and coaching:

An example of teacher-talk:

Partner A, your job will be to send your picture into your partner's thinking.

Partner B, your job will be to listen, without looking at the picture, and be ready to use your coaching cards to prompt your partner to say more. I will guide you through the steps.

Please stand. Standing helps to reset your brain and to stimulate your thinking. Partner A, please stand beside your partner... so you will be talking near your partner's right ear.

Partner A: When I say go, use the words, "I'm picturing..." to send your picture into your partner's thinking. Keep talking until I give you the three-second signal to finish your talking. Ready...go.

Give a three-five second signal for bringing the talking to a close: Say, "five seconds...", or use a sound to signal it is time to finish the talking.

Partner B, thank you for listening so carefully. Now your job is to use your coaching card icons to prompt your partner to give you more information. When I say go, I want you to say, "You could say more about ___". Ready, "Go."

	Give the signal for bringing the talking to a close. *Partner B, thank you for coaching to get more information. In a moment I am going to ask you to look carefully at your partner's picture. First, I want you to tell your partner what you noticed you pictured as s/he was talking. Ready... go.* **Give the three-second signal for bringing the talking to a close.** *Partner B, I want you to look at the picture again and look at the coaching card icons. Tell your partner what you think could picture more about to make your thinking even more powerful. Ready... go.* Invite learners to reflect on what makes a powerful image in their thinking. Add their ideas to the beginning set of criteria you are developing for Powerful Images. Repeat the process, with one partner sending and the other coaching. Sometimes at this point in the learning we show the inverted triangle to impress upon learners how important it is for retention of important ideas, to process information different ways. They will have experienced the processing of information multiple ways at this point. Based on their experiences, we want them to see how the learning leads to retention of important ideas.
Task analysis: What is this task asking us to do? **Setting/reviewing criteria for the task** **Setting *s-t-r-e-t-c-h* goals** for the task… **Setting the image…**	**Transforming…** personalizing & demonstrating understanding **Task analysis:** at this point we invite learners to re-visit the task to analyze what the task is asking them to do. Then, we set the image and guide them into responding. **An example of teacher-talk:** *Our next task is to send an image in writing to show what was important and why it was important in this part of the story. You have been sending images through talking, and idea-sketching. Now I want you to think like __ (a character or key figure in the story) and write to send an image. What is this task asking you to do; talk with your partner.* *After the task analysis, when we are introducing learners to the process, we set the image and guide learners into responding to the task. Later, when learners are comfortable with the process, we invite learners to generate personal s-t-r-e--t-c-h goals using criteria set for the task, AND then move into setting the image for responding to the task.* **An example of teacher-talk:** *Put yourself in a comfortable thinking position... feet on the floor and back straight. I will say a few words that will help your brain recall what was important; we call this setting the image. Notice the goals you set, notice how your brain brings the images back into your thinking...* **Coaching Point:** Leave a 1-2 second gap... between prompts. The space allows the brain to fill in the details. **An example of teacher-talk:** • *See yourself as ___. Notice what seems to be important and why, at this moment in time...* • *Notice the background... who is there... notice the thinking... the talking... the feelings...* • *Hear the sounds... notice the movement... the colours... sizes... shapes... textures* • *Notice what connections you are making... the messages or important ideas in the story...* • *See what is happening... and what is important right now... when I count to three, begin writing as ___ to send an image of what is important... and how you are feeling about it. 1•2•3.* **Coaching Points** • *Set the Image* is a very powerful cognitive tool; we rarely invite learners to write without using it. The process taps into image-producing brain activity. When learners go to write, their thinking is fueled and ready to produce language (Bell, 2010). • Like in drama, it is best if learners all write from the same perspective at first. Sometimes we have them write in role as an observer... gently moving into having them write in role as a character or key figure (or expert if the text is non-fiction).
	Reflecting
On goals & strengths	**Finding evidence of meeting personal goal/s… noticing strengths** Invite learners to look at their goals, and to put checkmarks on their idea-sketches and in their writing that shows evidence of meeting their goals.

	Invite them to think about what got stronger in their work today... you might offer what you noticed and invite people to volunteer what they noticed.
New thinking...	**A↔B: Noticing… new ideas… connections… new questions… emerging in the learning** The class has worked for a lengthy time. Invite them to think about connections they made - to things that have happened in their lives, to books they've read or videos they've seen, or to things out in the world; to share new ideas that came into their thinking, or to questions they have... if you have introduced the kinesthetic actions, model connection-making with the interlocking of thumbs and first fingers, new ideas by touching elbows, and questioning by holding a palm up by the right ear. See: the introduction in ***Getting Started with SmartLearning in Gr.3-6.***
Setting/discussing & justifying goals	**Next steps…** Invite learners to notice their thinking about the story as they get ready to sleep. Tell them sleep has a powerful effect on learning. The brain works while they sleep to help them remember their learning. Be thinking about the icons on the coaching card, and which ones help them to make powerful images or pictures in their thinking. Tell them you will be looking at their idea-sketches and their writing before you go to sleep. In *SmartLearning* we always thank the learners for the effort they put into their thinking.

*Text includes oral interactions, images, print: fiction & non-fiction, media, experiments, drama, presentations, hands-on experiences, fieldtrips…

Planning:

At the end of the day look at the ***A•S•K Skills & Competencies Continuum:*** idea-generating and taglines, and interpretation, to get a sense of where the achievement is. This is a perfect baseline assessment moment. Be sure to keep these very first samples to show where learners started.

Put the initial criteria you started to develop for powerful images onto a chart paper, with the quality on the left and the evidence on the right. We call this a ***T-chart***.

Choose a few powerful idea-sketches, taglines that captured what was important and a feeling, and a few samples of writing that send powerful images. You will use the samples in the connecting portion of lesson two, to develop criteria for Powerful Images.

Coaching point: You might scan the idea-sketches into the computer so you can project them for all to see. We always read the samples of writing to the learners, without them seeing the printing/writing. We want to anchor the powerful wording in their thinking without the distraction of the handwriting or spelling.

	Lesson 2
The Thinking behind the planning **Resources & Materials**	**Connecting:** **The Thinking behind the lesson** During the first lesson, many new routines were introduced. This lesson will start off with learners in partners being invited to analyze and talk about a few idea-sketches you chose, and what made the sketches powerful. They will hear a few taglines to notice if they captured something important and sent a feeling, and they will hear a sampling of writing to notice what makes a powerful image or picture in their thinking. This sounds like a lot. We just want them to try to figure out why you chose the sample. What was powerful in the sketch... what did the tagline do to create a strong picture and a feeling... what did the lines chosen do to create a powerful picture? We do not belabour this as we are the beginning. We just want learners to know that we will be building criteria with them, through their own work. We then invite them to choose a criterion to focus on, one that will s-t-r-e-t-c-h their skills. This will be their stretch goal. We ask them to look at the icons on their page, and circle one to focus on that will help them make powerful images in their thinking. **Coaching points**: If you think the choosing of a criterion for a stretch goal is premature or too hard, right now, use the samples to gently develop criteria for powerful images. For goal setting, invite learners to circle icons to focus on, ones that will help them make powerful images in their thinking.

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	At some time, you might show your class neurons actively communicating. Check out the link below: https://www.facebook.com/712078464/posts/10156756110738465?s=892625057&v=i&sfns=mo **Learners are in side-to-side partners.** **Resources:** • a sound you will use to signal bringing the talking to a close • **Chart:** Choose four words from the passage of text you plan to read: strong words that evoke an image or a feeling. These are not necessarily the most challenging words. Read-aloud texts are meant to be well above the learners' reading levels - up to two years above. We do not want learners to wrestle to spell words that are too difficult. • Print a *Thinking Log* for each learner. You will want Thinking Log - wm. • Put a reporting frame on the board: ___ *and I are wondering* ___ *because* ___. • Highlighters: one for each learner
Building Community **Setting the purpose** Task... role/s **Developing criteria** for the learning **Using criteria** to set s-*t-r-e-t-c-h* goals **Using Tool/s:** to activate prior knowledge & make connections, generate questions; develop prediction/hypotheses… **Reflecting on learning**	**Connecting:** **Set the tasks:** send powerful images that show what is important and how you are feeling as a character in the story. Notice what makes a powerful image in your thinking. • **Task analysis:** What is the task asking us to do? Invite learners to draw on their experiences in lesson one, to explain the task • **Tool:** *T-chart* **Analyze samples to create a T-chart of criteria for Powerful Images** Show idea-sketches from lesson one, one at-a-time, invite learners in partners to notice what makes a powerful image. Invite them to tell you why they think you chose the example. Read a few Taglines; invite learners to notice if they capture what was important and capture a feeling. Read 1-3 passages of writing - ones that develop a powerful image. You might read a few sentences, a whole piece, a few words or phrases. Invite them to notice what works and what make a powerful image in their thinking? Make a chart/add to the chart you started in lesson one. **You will come back to this beginning set of criteria for sending a powerful image, just before learners write.** After the conversation, invite learners to circle icons they know will s-*t-r-e-t-c-h* their skills and help them create powerful images in their thinking. **Coaching point:** With learners very new to the process we often give them the s-*t-r-e-t-c-h* goal of capturing what's important and feelings for the first few weeks, until they are comfortable talking about criteria and have anchored in their thinking qualities that make powerful images in the brain. *Expert learners… deliberately construct and seek out training in which the set goal exceeds their current level of performance… the more time expert performers are able to invest in deliberate practice with full concentration, the further developed and refined their performance* (Ericsson, 2003). **Activating prior knowledge and building background knowledge** **An example of teacher-talk:** *What do we know about this story and the character so far? Talk with your partner.* **Coaching points:** If some children were absent, partner children who were present with those absent, so one can talk about the story. Invite child/ren who were absent to ask questions. Watch the engagement. This is an opportunity to get a baseline view of the oral language skills. See: The *Oral Language Continuum* (website) for skills you will be developing throughout the year. **Signal talking to come to a close.** Comment on learners who take the time to finish their talking before turning their focus to you. Thank them for their respectful listening. Model: *'Touch-points'* to show full-focus. To build the background and distribute ideas we need to hear the thinking. We might *POPCORN* to exhaust ideas. We invite learners to 'pop' up one-at-a-time with information, just like kernels of corn.

If no one pops, I just go to the board and invite them to offer ideas. I put the title, or character's name in a circle, and invite them to offer ideas and information. I develop a web or cluster. I write the first person's ideas off the circle and invite others to give me information connected to the first idea. When we exhaust a chain of thinking, I invite them to start a new chain of thinking with different information. Then I invite them to wonder...

Questioning: Invite partners to wonder about the story.

An example of teacher-talk:

What are you wondering about the story? What questions do they want to have answered in the part of the story? What do you think the answers might be? Talk with your partner. You have two minutes.

Signal to bring the talking to a close.

An example of teacher-talk:

Hearing questions helps us to predict what might be important in the next part of the story. Talk with your partner again; choose something you are wondering about... and use evidence from the story to justify your thinking. I will be asking you to report-out using the frame on the board:

___ and I are wondering ___ because ___.

Learners are working in partners, but we have not decided who will be partner A or B when it comes to reporting-out. We do not want to overload them with new processes, so in the beginning we often use a fun way:

- the person with the most pets at home will be A.
- the person with the longest hair...
- the person with the birthday closest to today
- we toss dice... heads will be A
- pull a name from the *Sticks of Courage Container* (a jar or container with names on tongue depressors or popsicle sticks) and that person decides how we might choose who is A and who is B.
- geographic way: the person closest to the door is A; closest to the window, B

Once learners are comfortable with partner-talk routines, we use the concepts in the text we are studying to determine partners. See: *Guidelines for Structured talk* for ideas.

Through the process we want learners to sense being included, valued, respected and responsible for learning. Everyone's voice counts; hearing ideas expands everyone's thinking. The predictability of the routines, and the variations create safety and the social and emotional foundation for belonging. We work hard to create high challenge, low threat environments with routines learners can count on. We do not want anyone to sense rejection as we have learned that rejection hurts inside as much as a stomach punch to the body (Eagleman, 2016).

Predicting:

We have been learning how to use *Word mapping* as a powerful vocabulary builder. New research (Kilpatrick et al, 2019; Gentry, 2019; Kilpatrick, 2015) shows that vocabulary goes into long-term memory in a highly efficient way through the word mapping process. We develop orthographic knowledge through *Words their Way* (Pearson) routines, and Orthographic mapping through a mapping routine. We have now added word mapping as a connecting tool on day one of the *WordWork* routines, and as one of our vocabulary-builders before listening, reading, or viewing text. We have many processes to stimulate thinking and vocabulary development in the connecting phase of the learning cycle.

Word-mapping routine done at a fairly expedient pace

1. **Say the first word**, invite learners to repeat the word after you. They need to hear a correct pronunciation. Discuss the meaning/s.
2. Invite learners to **write the word** in the first box, just the way they hear it.
3. Show them the word spelled correctly; invite them to **copy the word**, and to go back to their spelling of the word and **put a check on every letter they got right**. **Highlight** where they made an error.

	4. **Copy the word again, highlight** where the error was made; **speak out loud** to explain what you learned about the word, where the mistake/s were made, and how you spell the word. 5. **Play with the word**; if it has syllables, clap, or drum them 6. **Sketch** to show the word's meanings. End with the jingle: *Hear, see, write, and explain stores new words in the brain*. Given what they already know and these four words, invite partners to stand and generate a prediction for what might be important or what might be a message in the next chunk of the story. Invite them to use the frame: ___ *and I predict* ___ *will be important because* ____. You might pull a stick from the *Sticks of Courage* (or *Cup of Luck* as one Invermere teacher named the container). The person chosen offers a prediction with justification, then others are invited to offer different ideas, until all unique ideas are heard. Invite learners to reflect: What are they noticing about their learning...? Hear ideas.

*Texts: processed in chunks
Tools:
Learners think with the text & use tools to develop skills & competencies
Reflecting on goals… noticing learning
	Processing:
	Chunk one:
	  • Look at the beginning set of criteria you started for **Powerful Images.**
	  • Invite learners to look back at the icons they chose to focus on.
	  • Read the passage chosen for today; *Set the image* for idea-sketching (use the words: see... hear... notice... to briefly overview the story - like in lesson one)
	  • Invite learners to do a *Detective-walk* in silence, noticing power in the images.
	  • Invite learners to return to their sketches and add new ideas in a different colour of pen or pencil. Seeing the influence of others' thinking on your own reinforces how valuable diversity is.
	  • Invite learners to create Tagline: 5-7 words that send an image and a feeling for what is important. Again hear a few as they are emerging. Test them to see if the words send an image and evoke a feeling.
	  • **A/B: send and coach** (As in lesson one):
	    I'm picturing...
	    You could say more about...
	    I noticed I pictured…
	    I noticed I could picture more about…
	
	Coaching point: WHEN LEARNERS ARE ADEPT at generating Taglines, you can increase the challenge by having them cover their Taglines as they send images and ideas into their partner's thinking. After listening, the partner tries to guess the Tagline. This will become challenging when they are reading and responding to different texts - in October when we move into applying the routines and skills in just-right texts. Even when they are hearing the same text, guessing Taglines is rigorous. We certainly can see why the process has such a powerful effect on thinking for deeper understanding. The children love it.
	
	Reflecting: invite learners to *POPCORN t*o share what they are noticing about their learning. Share what you are noticing as you walk-about.
	
	Reflecting… noticing learning in relation to goals

Task analysis: What is this task asking us to do? **Setting/reviewing criteria for the task** **Setting *s-t-r-e-t-c-h* goals** for the task… **Setting the image…**	**Transforming… personalizing & demonstrating understanding** **Re-view the task:** Invite learners to explain what the task is asking them to do. Look at the set of criteria you started to develop at the beginning of the lesson. Invite learners to think about the criteria and choose one as a *s-t-r-e-t-c-h* goal they would like to see in their writing. Have them write their goal in the space on the sheet. **Coaching point:** if you see writing the goal as being too challenging this early in the year, review the criteria and invite learners to choose two icons from the coaching card strip below the goal, to focus on as they are writing. *Set the image for writing…* use the same kind of wording as you did for idea-sketching... just enough words to stimulate a re-view of key ideas in the story

	... see yourself as... notice...hear the talking... notice the thinking... notice what seems to be important... notice your feelings etc.
	(Optional)**Tool:** *Capture the Essence:* As the writing comes to a close, invite learners to go back into their writing and underline 'must-have' words, words the the writing cannot live without. You might say, *"The"... Is that a must-have word?... "Have"... is that a must-have word?"* Invite them to choose words that show what is important and words that give strong feelings. As you see words and phrases being underlined, invite a learner to read the words loudly and slowly as a poem. As learners listen, invite them to notice if the words send a picture and a feeling of what is important.
	Reflecting
On goals & strengths	**Finding evidence of meeting personal goal/s… noticing strengths** Invite learners to go back into their idea-sketches and writing and *put a checkmark on evidence they met their goals.* If they chose feelings as a goal, they must find evidence of feelings in their work. If they chose capturing what is important and why as a goal, they need to find something important in their work, and a reason for the importance. This work builds metacognitive awareness and skill. Note: During a learning round, we were guiding learners to *'Edit without Agony'*. We had the learners set their page up in six boxes, with one criterion in each box. Their partner-work was to find evidence in their work of meeting the criteria. One boy called out, "I don't have anything in one of the boxes. A child from across the room replied, "Where there's a hole, there's a goal." The eighteen educators seeing '*SmartLearning* live' with nine and ten-year-olds all burst into laughter. **Invite random learners to share evidence they found.** Thank them for being such powerful learners. Invite them to look again to notice something in their work that got stronger today: talking to send an image, coaching, idea-sketching, thinking like a detective... writing... making a goal, noticing evidence of meeting goals...anything. You might use the tool*, ZIPPER*, to hear ideas. Start at one place in the room and invite the learner to share what they noticed. If they need more time, invite them to listen to others' ideas, and then be ready to share what they noticed when you come back to them. Be sure to return. If the learner is stumped, say something you noticed. Soon they will all relax into the process.
New thinking...	**A↔B: Noticing… new ideas… connections… new questions… emerging in the learning** • Invite partners to *share connections* they made as they worked with the story: connections to their own lives, to something they have seen or read, or to something in the real world. • **Tell them their brains are so smart at noticing; invite them to share new ideas that came into their thinking about the story...** and to touch opposite elbows when they notice a new idea... • Now that they have heard two chunks of the story, invite them to share wonderings or questions in their thinking
Setting/discussing & justifying goals	**Next steps…** Invite learners to be thinking about the story and the images coming into their thinking just as they go to sleep... and to think about a goal they would like to set for sending powerful images tomorrow. Tell them you look forward to finding examples of powerful images in their work. Thank them for the effort they put into their work. Together we all grow smarter.

*Text includes oral interactions, images, print: fiction & non-fiction, media, experiments, drama, presentations, hands-on experiences, fieldtrips…

All lessons follow the same *connect→process→transform→reflect* process. The daily tasks invite learners to think in role and write from the perspective of a main character. We use criteria and icons to set personal stretch goals and use tools to connect to the text. Always learners are guided to notice their learning and progress toward goals. They find evidence of meeting goals, notice strengths in their learning

and discuss new ideas, connections and questions emerging in their thinking. Confidence grows as competencies become visible.

Tools for: Building background knowledge and vocabulary

- *Word-mapping*
- *Sort·question & predict what might be important & why*
- *Gap Analysis ↔ Weaving with Text*
- *Guess & Check*
- *Predict & Check: list of words, predict which ones will be in the text, justify*
- *Establishing Meaning*
- *Growing images*

Word-mapping: *Hear, say, write and explain, stores new words in the brain*

Hear→say→write	Copy→v→highlight	Copy→highlight→explain	Sketch

Sort·Question·Predict and justify:

- A set of words from the chapter is given to the learners, they hear and say the words one at a time, discussing meanings with ideas shared across the class.
- Words are individually or collaboratively sorted and categorized.
- Questions are surfaced and played with: *What is the thinking behind your question; what do you want the story to reveal? What do you think the answer might be… why?*
- Learner stand (moving every 15 minutes resets the brain and integrates thinking), and generate a team hypothesis, using information gathered during discussion to justify their thinking. A name stick is drawn and that learner's team offers their collective thinking, justifying their prediction with evidence.

  **Reporting frame: ___ *and I predict an important idea might be ___. We think this because ___.*

- Learners generate and justify their own predictions.

Gap Analysis:

- **Phrases (4 or 5) selected from throughout the chapter are written on a chart or on separate slides that accumulate**. One phrase is revealed, partners discuss the images and ideas that come into their thinking. Learners **POPCORN** *t*o share ideas. The next phrase is revealed, with the first phrase still in view. Partner discussion and **POPCORNING** of ideas is repeated. After all phrases are revealed, the set of phrases is read aloud to get a sense of the whole; learners collaboratively generate and justify their predictions, rehearse their prediction, using a reporting frame and predictions are heard with either A or B partners presenting their thinking. Individuals record their personal predictions (in sketches and/or words).

Guess & check:

- Given what learners know already, and the title of the new chapter, learners work together to predict words that might be in the chapter. After the discussion, the teacher records choices on a chart. After reading the chapter, learners return to the list to verify words that were in the text.

Predict & Check:

- A list of vocabulary words are given to the class, with a few included that are not in the chapter. The words are read and discussed as a class, then partners circle words they predict will be in the text. Partners offer a choice, justifying the thinking. After reading partners return to the list and highlight or box words that were actually in the text.

Establishing meaning:
- Five or six words from the chapter are chosen. Learners are tasked to notice what the words mean, what the meaning is like (simile, metaphor, or analogy), and examples they know from the world
- Following the reading, partners work together to explain the meaning of the words. You might do a carousel where pairs work with one colour of felt pen on a chart to develop a definition, to show what the word is like (E.g. filtration is like panning for gold), and to give examples of the word. The chart papers circulate to another pair and in a different colour of pen, learners add to & extend the information.

Growing images:
- **A list of words** (6-8) are given to the students. In the first column, they sketch to show a meaning they know for the word, or if they have no idea, they take a best guess.
- As the words appear in the text, learners discuss the meaning intended in the text. **After finishing the chapter, they return to the words and sketch to show the author's intended meaning.**

♥

A template for planning:

The Thinking behind the planning	Lesson 3
Resources & Materials	
Building Community **Setting the purpose** Task... role/s **Developing criteria** for the learning **Using criteria** to set s-*t-r-e-t-c-h* goals **Using Tool/s:** to activate prior knowledge & make connections, generate questions; develop prediction/hypotheses… **Reflecting on learning**	**Connecting:**
***Texts**: processed in chunks **Tools:** Learners think with the text & use tools to develop skills & competencies **Reflecting on goals…** noticing learning	**Processing:** Reflecting… noticing learning in relation to goals
Task analysis: What is this task asking us to do? **Setting/reviewing criteria for the task** **Setting *s-t-r-e-t-c-h* goals** for the task… **Setting the image…**	**Transforming…** personalizing & demonstrating understanding **Setting the image…**
	Reflecting
On goals & strengths	**Finding evidence** of meeting personal goal/s… noticing strengths
New thinking...	**A↔B: Noticing…** new ideas… connections… new questions… emerging in the learning
Setting/discussing & justifying goals	**Next steps…**

*Text includes oral interactions, images, print: fiction & non-fiction, media, experiments, drama, presentations, hands-on experiences, fieldtrips…