

**Making Thinking Visible Programme**

**Tapestry SLC Meeting 1: Members Booklet**

***Thinking Routines – Introducing and Exploring Ideas***

**Agenda**

|  |  |
| --- | --- |
| **Item** | **Description** |
| **1** | **Introduction**  Learning intention:   * To develop a detailed and critical knowledge of the role of thinking routines and their use in the classroom to promote thinking dispositions and deeper understanding   Actions to support/demonstrate professional learning:   * Plan, try out and evaluate a range of thinking routines in the class * Engage in professional dialogue with peers, supporting changes in practice. |
| **2** | **Set Up**   * **Activity 1:** Think Puzzle Explore |
| **3** | **Meeting Focus**  Thinking Routines – Introducing and Exploring Ideas   * **Activity 2:** Exploring thinking routines for Introducing and Exploring Ideas with a view to trying one out in class |
| **4** | **Before SLC Meeting 2**   * Try out your selected thinking routine two or three times in different ways, contexts and/or with different learners and record the experiences on the **Planning and Reflection – Introducing and Exploring Ideas** page in your Professional Learning Log and bring to SLC Meeting 2 * Bring examples from your classroom to the next SLC Meeting * OPTIONAL - Complete your Initial Self Assessment against the GTCS Standard for Career-Long Professional Learning in your Professional Learning Log * Keep your Professional Learning Log up to date |
| **5** | **Sharing the Thinking**  Capturing your thinking from SLC Meeting 1 |

|  |
| --- |
| **SEE THINK WONDER** |
| Looking at an image or object:   * What do you see? * What do you think is going on? * What does it make you wonder? |

|  |  |
| --- | --- |
| **See Think Wonder**  ***A routine for introducing and exploring ideas and developing close looking as the foundation for greater insights, grounded interpretations, evidence-based theory building and broad reaching curiosity*** | |
| Looking at an image or object: | |
| **SEE** | What do you see? |
| **THINK** | What do you think is going on? |
| **WONDER** | What does it make you wonder? |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine provides learners with a structure for close observation, for noticing followed by interpretation. The ‘wonder’ final step ensures that learners have had time to take in new information through careful observation, think about and synthesise this information and then identify wonderings which can open up new areas of exploration and thinking initiated by the learners themselves. | |
| **APPLICATION: *When and where can it be used?***  Selecting an appropriately evocative, ambiguous and engaging stimulus for the routine is critical. Generally, the stimulus would be something new to the learners with plenty of detail to keep them interested. The image/object should offer different layers of interpretation. When choosing a stimulus, ask yourself, ‘Can I look at this for several minutes and notice new things? Does it spark my curiosity? This routine works best when learners hear from one another and build on ideas of others. If it is reduced to a worksheet activity it has been found that learners give shortened responses and often fail to notice as much because they don’t want to write it all down!  In learners’ ‘**SEE**’ responses look for improvement in their ability to notice details and complexities.  In their ‘**THINK** ’responses look for how learners substantiate their thinking – is it from their observations or form their own belief/opinion?  In their ‘**WONDER**’ responses look for learners to become more confident to become creative and adventurous in their wonderings instead of sticking to factual responses. | |
| **LAUNCH: *What are some tips for starting and using the routine?***  Make sure that you give enough time to looking closely and noticing details. The **SEE** stage provides the foundations for learners to start making their interpretations. You may want to contribute your own observations and interpretations to support the learners to examine the image/object more closely. You might say something like ‘one of the things I didn’t notice when I first looked at this was...’ or ask the learners to show you where exactly they are looking and ask them what they see and what makes them say that. It is important that the **SEE** stage is separate from the interpretation. Sometimes learners may find it difficult to say what they see and take time to think before they offer interpretations. | |

|  |
| --- |
| **ZOOM IN** |
| Look closely at the small bit of image that is revealed.   * What do you see or notice? * What is your hypothesis or interpretation of what this might be based on what you are seeing?     Reveal more of the image.   * What new things do you see? * How does this change your hypothesis or interpretation? Has the new information answered any of your wonders or changed your previous ideas? * What new things are you wondering about?   Repeat the reveal and questioning until the whole image has been revealed.   * What lingering questions remain for you about this image? |

|  |
| --- |
| **Zoom In**  ***A routine for introducing and exploring ideas and developing flexible thinking*** |
| Look closely at the small bit of image that is revealed:   * What do you see or notice? * What is your hypothesis or interpretation of what this might be based on what you are seeing? |
| Reveal more of the image:   * What new things do you see? * How does this change your hypothesis or interpretation? Has the new information answered any of your wonders or changed your previous ideas? * What new things are you wondering about? |
| Repeat the Reveal and Questioning until the whole image has been revealed   * What lingering questions remain for you about this image? |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine provides learners with a structure for looking closely and making interpretation. The routine reveals only portions of an image over time and as in History and other disciplines our interpretations are tentative and limited by the information at hand. The routine allows learners to find out that it is OK to make tentative interpretations and to change your mind about something when you have found out more about it. The routine encourages learners to act as detectives building up meaning both individually and collectively. |
| **APPLICATION: *When and where can it be used?***  When selecting for this routine keep in mind that only sections of the image will be visible to the end and you might be able to use a familiar image depending on which portions you reveal initially. The process build excitement and mystery When choosing a stimulus ask yourself ‘Are there separate areas of the image that tell a different story? Are the parts as potentially interesting as the whole image? You might select a section of a large painting, a photograph of a geological site, a data display, or even a poem. Choose something which is meaningful to your subject area and that will draw learners in. Select the portions to be revealed, thinking about the information which that portion conveys. Each reveal should add significantly to the meaning of the portion originally displayed. It should challenge learners to think in new ways about what they see. Decide on when in the process you will reveal something that is surprising or that will force new interpretations.  In learners’ responses look for how they pay attention to details and complexities when they form their interpretations. Look for how they support their assumptions by referring to what they have seen and noticed. Are they developing new hypotheses as they synthesise new information, or are they reluctant to move from their original theories? Are learners building on the ideas of theirs or do they limit their thinking to their own ideas? Are they able to reflect on how and why their thinking has changed? |
| **LAUNCH: *What are some tips for starting and using the routine?***  Presentation software is useful to create slide by slide reveals or by enlarging the image and creating masks to reveal portion by portion. There is no set number of reveals. Each reveal, however, should provide new information to challenge learners’ thinking. Encourage learners to make connections to other situations when their thinking has changes as they have found out more about a situation or something they have learned previously. |

|  |
| --- |
| **THINK-PUZZLE-EXPLORE** |
| Consider the subject or topic just presented:   * What do you *think* you know about this topic? * What questions or *puzzles* do you have about this topic? * How might you *explore* the puzzles we have around this topic? |

|  |
| --- |
| **Think-Puzzle-Explore**  ***A routine for introducing and exploring ideas, connecting prior knowledge and planning for deeper understanding.*** |
| Consider the subject or topic just presented:   * What do you *think* you know about this topic? * What questions or *puzzles* do you have about this topic? * How might you *explore* the puzzles we have around this topic? |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine invites learners to connect to their prior knowledge, to be curious and to plan for independent or group inquiry. It can provide teachers with a sense of learners’ current understanding of a topic and can influence the structure and planning of subsequent teaching and learning. It sets the stage for deeper inquiry. |
| **APPLICATION: *When and where can it be used?***  When selecting for this routine the subject may range from a big idea, a specific topic, or an item in today’s newspaper to almost anything relevant to the learners and is worth developing an understanding at a deeper level. Puzzles raised are usually specific in nature; however, by selecting complex, rich topics responses are more likely to invite wider ranging questions and the exploration of multiple interpretations.  This routine is usually placed at the start of a topic. It is also useful to revisit throughout a topic to identify and explore new puzzles and also at the end of a topic as a reflective tool to show learners how their understanding has grown. As this routine helps inform future teaching and learning it is important to document learners’ responses. This can be done by the learners themselves in small groups or through the use of sticky notes or by the teacher or learners as whiteboard notes.  In learners’ **THINK** responses look for any misconceptions the learners have which will need to be addressed if understanding is to be developed. The **PUZZLE** responses allow teachers to find out what the learners are interested in finding more about. Look to see if learners are able to frame inquiry questions and show broad curiosity as opposed to merely finding out facts – not that this should be discouraged but should be complemented by broader, more adventurous questions. The **EXPLORE** stage provides an opportunity to look at how learners are able to plan out an inquiry individually and/or as a group. |
| **LAUNCH: *What are some tips for starting and using the routine?***  The language used in this routine such as ‘What do you think you know about...?’ gives learners permission to have a go, raise possible responses and support curiosity. The language in the TPE questions helps the less confident learners to engage and offer suggestions. It also helps learners to be more open ended in their questioning.  You may want to use only part of the routine and to return at a later time to look at the other parts. Or you may like to start off with **THINK** and together learners’ thoughts on **PUZZLE** and **EXPLORE** in an ongoing way e.g. Flip charts available in the classroom throughout the topic for learners to note their puzzles and their plans to explore.  In **EXPLORE**, it might be a new move for teachers to ask learners to plan their own inquiry. It might also be new for learners and collectively planning as a class or group might support them to develop a model to use in the future.  You might need to push learners a little if their responses to **EXPLORE** are limited e.g. If the response is ‘Look at the Internet’ you might ask questions such as ‘What kinds of sources are credible? Who else might we ask? Where else might we look? If we can’t find information on the internet or in books, how might we find this out for ourselves?’ |

|  |
| --- |
| **CHALK TALK** |
| Looking at the topic or question written on the chart paper:   * What ideas come to mind when you are considering this idea, question or problem? * What connections can you make to others’ responses? * What questions arise as you think about the ideas and consider the responses and comments of others? |

|  |
| --- |
| **Chalk Talk**  ***A routine for introducing and exploring ideas, building understanding through collaboration.*** |
| Looking at the topic or question written on the chart paper:   * What ideas come to mind when you consider this idea, question or problem? * What connections can you make to others’ responses? * What questions arise as you think about the ideas and consider the responses and comments of others? |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine asks learners to consider ideas, questions or problems by silently responding in writing to the prompts given and to the thoughts of others. They can move flexibly form one idea to another in a non-linear way. They can formulate questions and take the time they need to think through the collective information produced. Learners do not ‘sign’ their responses and frees some learners up to take more risks and offer ideas. The routine builds on the notion of building understanding in a collaborative way through putting forward ideas, questioning one another, and developing ideas further. |
| **APPLICATION: *When and where can it be used?***  The prompt or prompts for a Chalk Talk can be single words or phrases related to a topic of study. Questions as prompts can often generate a riche level of discussion and interaction. Try to give questions which invite different perspectives and reactions. When posing questions, don’t shy away from controversial subjects. Chalk Talk can provide a safe calm environment for discussing issues that might be more difficult to address in a live, verbal discussion. It can also be used for reflection e.g. ‘What have you been most surprised by in this topic/unit?’ ‘what is hard for you to master in this topic?’ ‘What skills do you have around this topic that you could share with others?’ ‘How do you know when you really understand something?’  In learners’ responses look for the relevance of the contributions the learners are making. Are the contributions related to the big ideas or are they peripheral connections? Are learners able to put forward their own ideas and original thinking or are they hanging back and merely echoing the responses of others? How are learners responding to the postings of others? Are they building their understanding by incorporating ideas and wonderings of others or do they find it difficult to assimilate ideas from other learners? |
| **LAUNCH: *What are some tips for starting and using the routine?***  When setting up a Chalk Talk, if you wish learners’ postings to remain anonymous, provide markers of  different colours on the tables and learners can choose to use a different colour for different postings. If you want to document a thread of thinking, learners should be asked to use the same colour throughout the routine.  This routine works well when learners are encouraged to move around the table in a circular fashion, reading and posting as they go round.  Think about how long to give to learners to reflect, read and respond without getting bored. Adults and older learners engage well in Chalk Talk for about 5 minutes before moving to another group for another 5 minutes. Younger learners may need a bit more time for the reading and writing process.  Chalk Talk sheet can be placed where learners can access them over the next few weeks to enable them to revisit their ideas and add on to them if desired. Chalk Talk can be started in one lesson and continue in another lesson giving learners more time to think about complex topics and issues. |

|  |
| --- |
| **3-2-1 BRIDGE** |
| Thinking about the key concept or topic, identify:  **INITIAL RESPONSE NEW RESPONSE**  3 Words 3 Words  2 Questions 2 Questions  1 Metaphor/Simile 1 Metaphor/Simile  **BRIDGE**  Identify how your new responses  connect to or shifted from  your initial response |

|  |  |
| --- | --- |
| **3-2-1 Bridge**  ***A routine for introducing and exploring ideas and linking prior knowledge, questions and understandings with new ideas*** | |
| Thinking about the key concept or topic, identify: | |
| **INITIAL RESPONSE**  3 Words  2 Questions  1 Metaphor/Simile | *Ask for three words – words that quickly come to mind when they think of this topic or issue*  *Ask for two questions that quickly come to mind*  *Ask for one metaphor /simile. You may need to provide a simple example of a metaphor and simile and remind learners that metaphors and similes are simply connections one makes between one thing and another because they have important features in common.* |
| *Teach the lesson or present the new learning by video, text, image story etc. There must be enough substance in the lesson to move learners’ thinking beyond their initial understandings.* | |
| **NEW RESPONSE**  3 Words  2 Questions  1 Metaphor/Simile | *Repeat 3-2-1* |
| **BRIDGE**  Identify how your new responses connect to or shifted from your initial response | *Invite learners to share with partners both their initial and new 3-2-1 responses and to discuss what they are noticing about how their thinking has shifted from the initial responses. Remind learners that their initial thinking is neither right nor wrong, simply a starting point. As a class or whole group, identify some new thinking and changes in thinking that have taken place. Try to capture major shifts and changes.* |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine focuses on the associations learners have around a topic in terms of words, questions and connections and reveals more than simply what facts the learners might know. **WORDS** activate some basic ideas. **QUESTIONS** push a bit further. **METAPHOR/SIMILE** is a test of how learners understand and frame a topic or issue. **BRIDGE** helps learners link their prior knowledge, questions and understandings with the new learning they are undertaking. | |
| **APPLICATION: *When and where can it be used?***  Decide on how the learners will record their response in a way which will be accessible to them at a later date e.g. a journal or sheets of paper which you will collect. Present the topic in a straightforward and simple language as possible.  The first 3-2-1 can be used as part of a pre-assessment to indicate where learners’ thinking is regarding the topic. The metaphor/simile part is most likely to reveal understanding or misunderstanding. The process of repeating 3-2-1 during a topic after new learning has been taught enables teachers to see how readily learners are synthesising and integrating new information into their thinking on the topic. Look to see if learners’ questions show curiosity and engagement, move learning forward and get to issues of deeper understanding of the topic. | |
| **LAUNCH: *What are some tips for starting and using the routine?***  Some teachers especially of very young children have found it useful to provide lots of examples and regularly model the use of metaphors and similes. Analogies work equally well depending on the age and experience of the learners. The **BRIDGE** is a key aspect of this routine and offers the chance for learners to be metacognitive. It is useful for learners to discuss their responses with a partner or small group. Often others notice things in responses that we might miss. | |

|  |
| --- |
| **COMPASS POINTS** |
| Consider the idea, question or proposition before you:   * *E = Excitement.* What excites you about this idea or proposition? * *W = Worries.* What do you find worrisome about this idea or proposition? What’s the downside? * *N= Needs.* What else do you need to know or find out about this idea or proposition? * *S = Stance, Steps or Suggestions.* What is your current stance or opinion on the idea or proposition? What should your next step be in your evaluation of this idea or proposition? What suggestions do you have at this point? |

|  |  |
| --- | --- |
| **Compass points**  ***A routine for introducing and exploring ideas from different perspectives with a focus on decision making as a process*** | |
| Considering the idea, question or proposition before you: | |
| **EXCITEMENTS** | What excites you about this idea or proposition? What’s the upside? |
| **WORRIES** | What do you find worrisome about this idea or proposition? What’s the downside? |
| **NEEDS** | What else do you need to know or find out about this idea or proposition? |
| **STANCE/STEPS/SUGGESTIONS** | What is your current stance or opinion on the idea or proposition? What should your next steps be in your evaluation of this idea or proposition? What suggestions do you have at this point? |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine enables groups of learners to consider an idea or proposition from different angles. By focusing on all four compass points the routine provides a structure which helps learners to take time and avoid rushing into judgement. By thinking about excitements and worries it provides learners with more balanced thinking. Working out what you need to know is more complex and requires reflective thinking. Sometimes it is useful to let the group have more time to identify Stances/Steps/Suggestions. | |
| **APPLICATION: *When and where can it be used?***  Compass Points works well when the topic, idea or proposition presents dilemmas or differing point of view or when some people are so strongly attached to their perspectives it is difficult for them to broaden their thinking around the idea. Where the topic is new to learners allow for questions of clarification to make sure that learners have some sense of it.  The Compass Points routine provides many opportunities to observe learners’ flexibility in considering different aspects of a problem. Are learners able to think beyond their immediate reactions and positions? Are they able to generate multiple responses at each stage or just one? Are they able to analyse the information that they have to manage the Need to Know stage? Can they identify what else is needed to further their own and the group’s understanding? | |
| **LAUNCH: *What are some tips for starting and using the routine?***  Make sure that you give enough time to allow for questions of clarification so that learners have some sense of the topic. To document, place four large sheets of paper, one headed up for each Compass Point on the walls of the classroom or somewhere else accessible for learners. Provide learners with sticky notes to write their ideas on. Alternatively, you may want to use the whiteboard to write the proposition on, with the four compass points written around. Invite learners to consider the comments made by others. Invite comment on themes which emerged. Did some learners have the same responses? Spend some time on suggestions for moving forward and develop a plan for putting into action at least some of the suggestions. | |

|  |
| --- |
| **THE EXPLANATION GAME** |
| Taking a close look at the object you are trying to understand:   * *Name it*. Name a feature or aspect of the object that you notice. * *Explain it.* What could it be? What role or function might it serve? Why might it be there? * *Give reasons.* What makes you say that? Or why do you think it happened that way? * *Generate alternatives.* What else could it be? And what makes you say that? |

|  |  |
| --- | --- |
| **The Explanation Game**  ***A routine for introducing and exploring ideas by deconstructing, looking closely, building explanations and interpretations*** | |
| Taking a close look at what you are trying to understand: | |
| **NAME IT** | Name a feature or aspect of the object that you notice.  *Record all the different parts/ features you see. This can be done on sticky notes.* |
| **EXPLAIN IT** | What could it be? What role or function might it serve? Why might it be there?  *The goal for this stage is for learners to come up with as many different explanations as possible. Note these explanations down on sticky notes*. |
| **GIVE REASONS** | What makes you say that? Why do you think it happened that way?  *Press learners for evidence. What in particular makes them say that?* |
| **GENERATE ALTERNATIVES** | What else could it be? And what makes you say that?  *Keep learner attention on the relationships between the features they have identified and why these features might be the way they are rather than coming up with a fixed explanation.* |
| **PURPOSE: *What kind of thinking does this routine encourage?***  This routine invites learners to build causal explanations for why something is the way it is. It is noticing the parts and generating possible and even alternative theories and explanations about the relationships between those parts and the whole that makes this routine powerful for developing understanding. | |
| **APPLICATION: *When and where can it be used?***  Learners may already know what it is that they are looking at but still not fully understand how it operates, functions or is placed. Learners are encouraged to look at the parts more than the whole in using this routine e.g. learners may know that they are looking at a microscope but can use the Explanation Game to better understand the parts of the microscope and what purposes they serve.  Listen to the explanations given by the learners and take note of the quality of their theories rather than ‘correctness’. Do they state the obvious or do they probe beneath the surface looking for connections and possible relationships?  Are the explanations under-described or are they rich in descriptive detail? Do their explanations capture important characteristics or themes or elements, or do they tend towards the unimportant, disconnected details? | |
| **LAUNCH: *What are some tips for starting and using the routine?***  Learners tend to want to name the object and see whether they got it right. Resist this urge as much as possible, keeping the focus on looking closely at features and constructing explanations for how things are related, what purposes they might serve. When learners insist in telling what the object is, redirect them by asking e.g. ‘what makes you say that?’ or ‘If this weren’t what you think it is, what might it be?’  The stages of the routine are clear but can often blend into one another. It is important to keep the stages as distinct parts of the discourse and documentation in order to encourage an environment for conjecture and hypothesis. | |