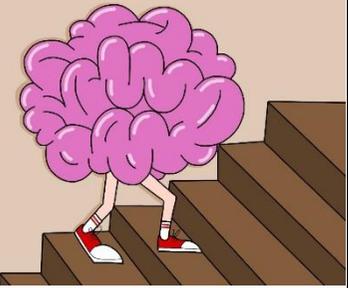


Level up Meta- cognition	What is it?	Application of this activity	How does it help learners to make progress?	Teacher reflections from this activity
Reflection dice		<p>We've often seen learners who are not in the crucial habit of reflecting on what they've learnt or more importantly how they've learnt. Reflection dice are an excellent way to get learners to think about their own thinking after an activity or at the end of a lesson. Exemplar questions that could be used on the different faces:</p> <ol style="list-style-type: none"> 1. <i>What parts of the learning would I find hardest to explain to someone else?</i> 2. <i>How could you use this learning in another subject or outside school?</i> 3. <i>How will I remember this learning?</i> 4. <i>What are the steps or stages of explaining this concept/problem?</i> 5. <i>If you did this again how would I do it differently?</i> 6. <i>How have I solved problems like this before?</i> 	<p>By rolling the dice and asking learners to discuss with their partner e.g. 'if you did this again, how would you do it differently?' the teacher is ensuring learners reflect on the thinking they used during an activity and whether there were alternative, more effective ways of tackling the activity in future. Without consciously reflecting on their thinking processes, learners may continue to use an ineffective method that hampers their future progress.</p>	<p><i>What could be the six key questions that used regularly would help learners to think about how they are learning?</i></p> <p><i>How can you make more time in lessons for learners to use reflection dice?</i></p> <p><i>How could these questions help learners to improve or amend their work? How will you know whether they have helped?</i></p>
Graphic Organisers		<p>Learners can be helped enormously by thinking about their thinking before they start an activity. Doing so, can really help learners who have a tendency to rush into starting. Graphic organisers are a useful tool for learners to plan the sequence or structure of their thinking and can be applied to a wide range of subjects.</p>	<p>Using graphic organisers can be a great way for learners to think visually through their plan. For instance, a flow diagram can be used to break thinking down into a series of steps. They also help to model pre-writing strategies to help learners to plan where particular features are going to be included.</p>	<p><i>There are a wide range of graphic organisers mapping different thinking processes. Which would be a best fit to get learners to think more deeply about planning their work?</i></p> <p><i>How could you use graphic organisers as part of display or as laminated table mats to help learners throughout a topic?</i></p>

<p>'Think-alouds'</p>		<p>How useful would it be if we knew what every learner was thinking, at key points of the lesson? Just as in a cartoon strip where a thought bubble shows us what a character is thinking, 'think-alouds' can give us an insight into what's going on inside the heads of learners.</p> <p>One way of doing this is by using mini-whiteboards. We can ask learners to write their thoughts down in a sentence or two and place them next to them or above their heads at certain points in the lesson.</p>	<p>Seeing and hearing the thinking of learners provides valuable feedback that can be used by the teacher to better understand why certain mistakes are being made. Teachers can also model through 'think-alouds', showing learners what good thinkers do and how they might need to amend their own thinking. 'Think-alouds' are especially useful when reading to learners. The learner can then apply the thinking process for themselves to the same piece of work that the teacher is reading through.</p>	<p><i>What parts of a topic could you model thinking aloud to learners?</i></p> <p><i>How could you use this approach to get faster feedback from learners about their level of understanding?</i></p> <p><i>What other ways can you explore to make your own thinking and subsequently learners' thinking more explicit?</i></p>
<p>Before, during and after</p>		<p>Metacognition has a key role to play, not just in planning and reflection but also during a lesson. For example, thinking through a challenge <i>before</i> they embark upon it enables learners to plan their own steps to being successful. They can review this plan at key points using questions which also help them to evaluate their work <i>while</i> they are doing it. Afterwards it is really helpful for them to think about how work could have been made even better.</p>	<p>Setting regular time aside for learners to think ahead of a challenge, during it and after, enables them to make revisions to how they think about their learning. This process also develops learners' understanding of both the outcome they are aiming at, and how to get there. Without this clarity, learners will remain poor assessors of their own and others work. They will also remain heavily dependent on their teacher spotting the gaps that they still have to close in their own work.</p>	<p><i>What questions can you devise before learning begins to prepare learners for success?</i></p> <p><i>How can you create more space for reflective questions to take place while learners are tackling a piece of work?</i></p> <p><i>What questions can you devise to help learners look back over a topic to improve their learning elsewhere?</i></p>

Meta-cognition entails an awareness of your own thinking. The strategies in this 4by4 help train learners to become better thinkers, better able to cope with learning that is more complex. Being able to master their own thinking enables a learner to use more agile ways of solving problems both in and out of the classroom.

The ideas within this 4by4 come from teachers who have gone through the Outstanding Teaching Intervention (OTI). To find out more about OTI or our other courses contact us at www.malit.org.uk