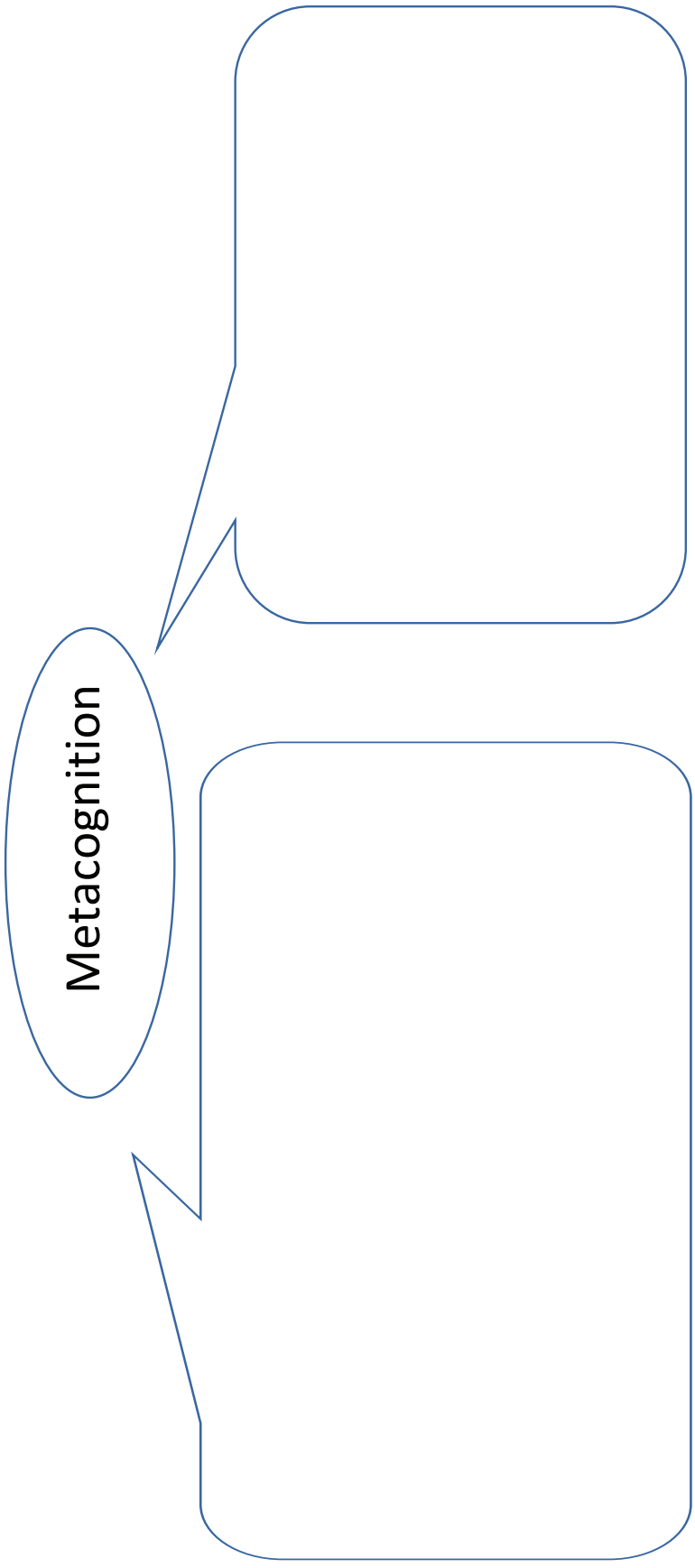
SOAR

Teaching Frames® for Literacy

Fostering Metacognition for Disciplinary Discussion

EPF Essential Practice Frames for teaching


Metacognition

Teaching for Metacognition in Disciplinary Discussions

Introducing Metacognition

Define and demonstrate metacognition:

- Awareness of what you know and don't know
- Action you take to address flaws or gaps in what you know

Examples:

- Anchor chart
- Paint chip card

Engaging Students in Reflective Processes

Foster reflective thinking

Build self-awareness

Integrate reflection

Examples:

- Reflection protocol
  - What worked?
  - What didn't work? Why?
- Do Now
- Exit Ticket
- Fist to Five
- Strategy checklist
- Talk Detectives

Deconstructing Reflective Processes

Visibly enact your thought processes as an expert learner

Provide guided practice:

- Students verbalizing thought processes while in discussion with others
- Guidance by teacher and/or students

Examples:

- Model/non-model
- Fishbowl analysis
- Thought Bubbles

Teaching Specific Strategies

Demonstrate:

- What the strategy is
- How to use the strategy
- Why and when to use the strategy
- How to evaluate use of the strategy

Examples:

What to do when

- I don't understand
- my partner doesn't understand
- we both need help to move the conversation forward

Guiding Student Use of Strategies and Processes

Foster students' ability to regulate discussion by:

planning
monitoring
evaluating

Promote independent use of metacognitive strategies and processes

Examples:

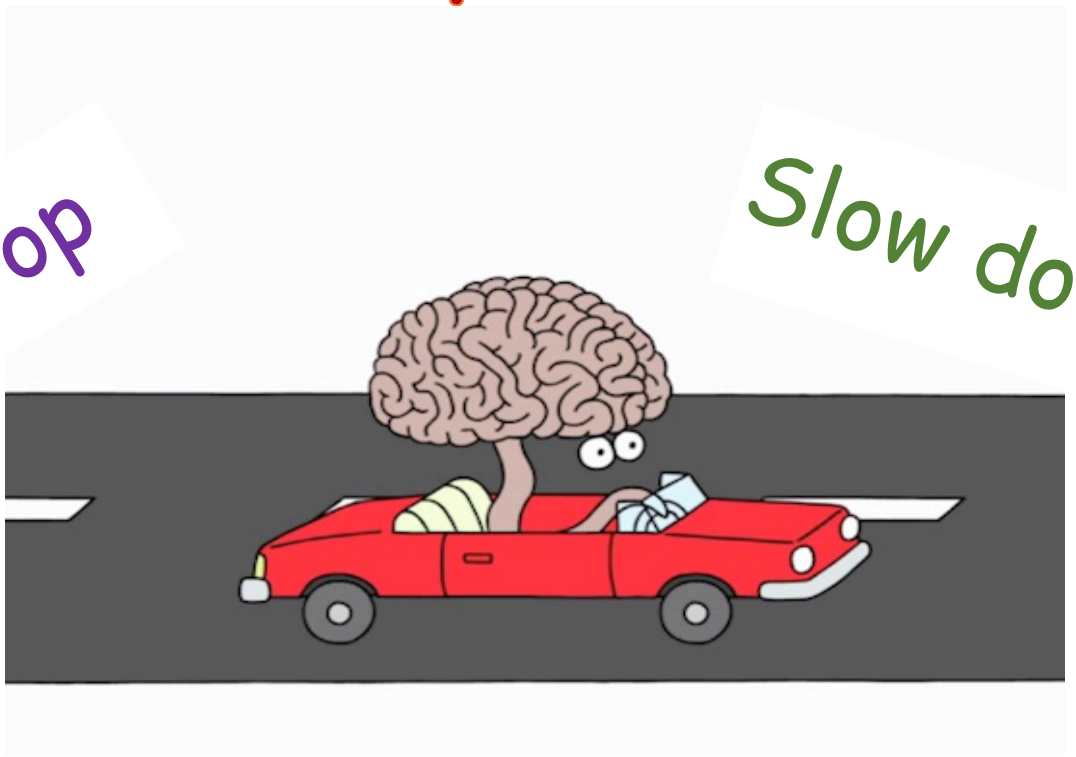
- Additional modeling
- Feedback
- Prompting with response cards

Gradual Release  of Responsibility

Metacognition

1. Awareness of what you know and don't know
2. Action you take:

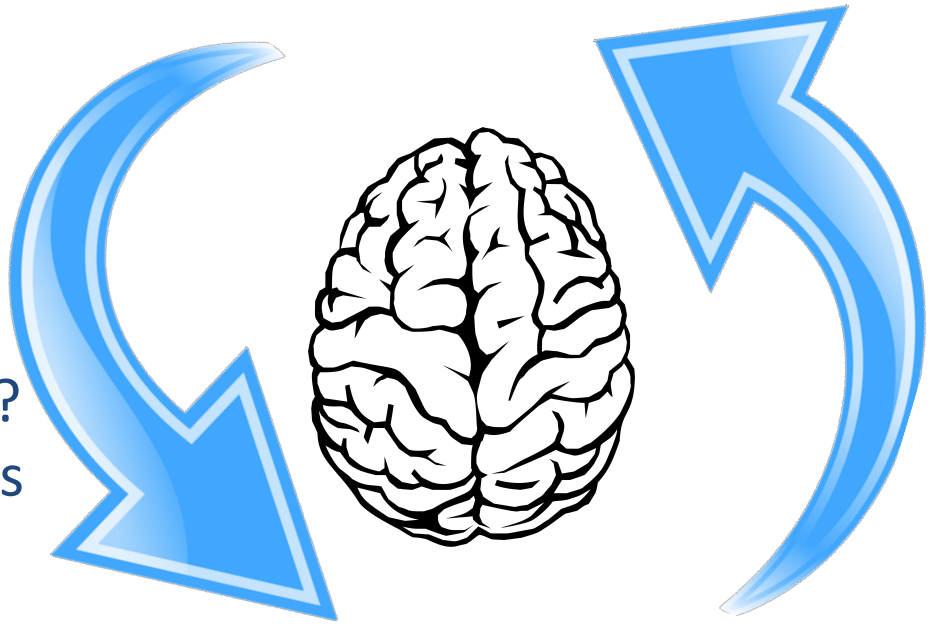
Drive your brain



Metacognitive Regulation Cycle

Metacognition

<u>Planning</u>
What prior knowledge will help me with this discussion?
What resources should I use?



<u>Evaluating</u>
How well did I do?
What did I learn?
Can I apply the strategies to other discussions?

Cognition

<u>Monitoring</u>
How is the discussion going?
How should I proceed?
Should I reread the prompt?

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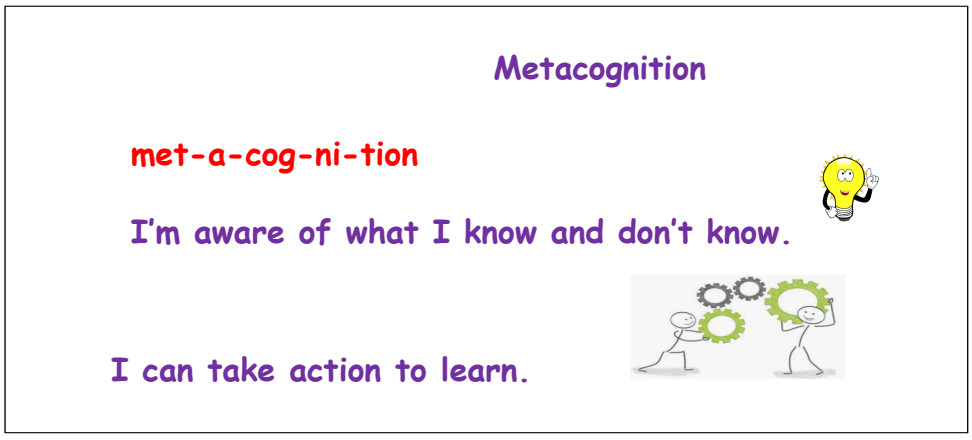
Scenario - Introducing Metacognition

Mr. Carter is introducing metacognition to his first graders. He says, "I have a really big word I want us to know and understand. It is metacognition. Say it with me, friends. Metacognition. Has anyone ever heard that word before? A few of you. I am going to write it on the whiteboard. Let's clap it out. Met-a-cog-ni-tion. Excellent. It has five syllables. One part of metacognition is being aware of what you know and what you don't know. An example would be us learning our high frequency words. We each have our stack of words. When we can read them automatically, we move them out of our stack. We know that we know those words. The words that are left in our stack are the words we don't know well. So, I am aware of which words I know and which words I don't know. That is one part of metacognition, being aware of what you know and don't know. I am going to draw a lightbulb here to represent us being aware of what we know and don't know.

The other part of metacognition is knowing what action to take to learn what you don't know. Let's think about the high frequency words we still need to learn. What can we do to learn them? What ac2on can we take? Talk to a neighbor and see what ideas you can come up with." Students share out some ideas like practicing more and looking for the words when they read. "Very good. Those are all actions you can take. I am going to draw gears to

represent the action we take to learn what we don't know.

So, metacognition is being aware of what you know and don't know and then taking action to learn. Turn to your neighbor and explain what metacognition is.



Engaging Students in Reflective Processes

Foster reflective thinking

Build self-awareness

Integrate reflection

Examples:

- Reflection protocol
  - What worked?
  - What didn't work?
  - Why?
- Do Now
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Scenario - Engaging Students in Reflective Processes

Ms. Peck has already introduced her third-grade students to metacognition. She is now working on having them be more reflective about their discussions in order to improve upon them. Students have just completed a discussion with their partners. She distributes a reflection sheet that has these prompts: What worked? What didn't work? And Why?

"You are all getting so much better in your discussions. Today I want us to think more deeply about our discussions and how each of you did . The first prompt is 'What worked'. Think about what worked in your discussion with your partner. Some things to consider might be: Did you both take turns? Did you both share your ideas? Did you ask each other clarifying questions?

The next prompts ask, 'What didn't work' and 'Why'. Think about your discussion. Did it stall? Did you stay on topic? Did you fortify your discussion? Did you help each other get better? So, with your partner, discuss each of these prompts to reflect on how your discussion went."

What worked?

What didn't work? Why?

Deconstructing Reflective Processes

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Provide guided practice:

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Examples:

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Scenario - Deconstructing Reflective Processes

Mr. Vu is working with his students on strengthening their reflective processes regarding discussions. "Turn to your partner and explain how our self-reflection has strengthened your discussions." Students then share out how it has helped them be aware of what they are doing well and the gaps that they need to strengthen. "Today, I want to demonstrate some things you can do to continue to strengthen your discussion and co-construct your knowledge with your partner. I am going to be partner A and all of you are going to be partner B. We are going to discuss our article: 'Species at Risk'. The prompt is 'Discuss the reasons the Monarch butterfly has decreased its population. I'll start.

Teacher: "One reason that the monarch butterfly population is dropping is due to climate change. Now what can you, partner B, say to me. Joaquin?"
Class: "I could say another reason is pesticides."
Teacher: "That is a correct. You could state another reason. Is there something else partner B could say? Yes, Isabelle."
Class: "I could ask you to elaborate."
Teacher: "Yes, we can discuss climate change more, so we make sure we both understand it before we move on to the next reason. This helps deepens our discussion. So, I will respond to Isabelle. I think that weather is always changing. We are having bigger storms and hotter temperatures. The monarch butterfly migrates from Mexico to the upper United States, over 3,000 miles. Now, do you think I should ask you, partner B, a question? ... Yes, now I can say 'what was another reason the monarchs are decreasing?' Yes, Joaquin."

Class: "Pesticides is another reason they are decreasing in numbers." Teacher: "I don't remember reading that in the article so I am going to ask Joaquin, 'Can you show me where it says that in the text.'
Class: "Right here is says, 'These include habitat loss and pesticides." Teacher: "I need to figure this out. The article says habitat loss and pesticides so I want to see if we can figure out these two things. I am going to ask you, partner B, a question to help me understand this more. 'What do you think it means by habitat loss?' How can you respond? Georgia."
Class: "In science studied that a habitat is where animals live. So, where the monarchs live is being destroyed or isn't around anymore."

Teaching Specific Strategies

Demonstrate:

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Examples:

What to do when

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Scenario - Teaching Specific Strategies

As a class routine, Ms. O'Rourke has her students reflect on their discussions. She now wants to teach them a strategy she thinks will strengthen their discussions further. "You have really improved with your discussions because you have been reflective about what you are doing well to deepen your discussions and about those areas that need improvement. Nonetheless, I have noticed that there are times when your discussions seem to stall or shut down, so I want to teach you some strategies to help. What seems to happen is one of you stops talking because you don't know what else to say or you are confused about the topic. Let's review how we have defined metacognition. Turn to your partner and discuss what metacognition is and give an example when you have acted metacognitively."

After students have had a chance to discuss, Ms. O'Rourke has them share. Then she says: "So, as you stated, you first need to be aware that your discussion has stalled and that you don't understand what to do. Once you are aware, you need to take some action to get the discussion moving again. I have a reference chart here on the white board for us to discuss. One thing you can do is reread the prompt. This gives you an opportunity to refocus your thinking and come up with some ideas to add to the discussion and move it along. It also gives you a moment to clarify the prompt if necessary. Another strategy is you can summarize what you and your partner have said so far. By summarizing the discussion, you are "retracing" the discussion to see where it broke down. You might find that a question or comment took your discussion off topic which caused it to stall. The third strategy is to ask your partner for help to get back on track. You could say, 'I can't think of anything else to say. Can you ask me a question or make a comment to get us moving again?' Or you could say, "I am not sure if I'm on the right track with our discussion. Can you help me get back on track?'"

"I really want you to be thoughtful in your discussions and use these strategies if you get stuck. When you have completed your discussion, I am going to ask you and your partner to process your use of these strategies: Did you reread the prompt, summarize the discussion, and/or ask your partner to help?

Guiding Student Use of Strategies and Processes

Mr. Lu has introduced metacognition, engaged them in the reflective process, deconstructed the reflective process, and taught metacognitive processes and strategies to his class. As a result, he feels they are being more metacognitive in their discussions. He is now monitoring and guiding his students in using those processes and strategies automatically. "You all have grown so much in working with your partners to co-construct your learning through your discussions. I see you using the metacognitive strategies we have discussed. Today while you are having your discussion, I will be walking around listening to how you are using those strategies to regulate your discussions. I might ask you a question or set down a card as a reminder of what you could be doing to strengthen your discussion. Let's look at the cards so you are familiar with them. This one says, 'Summarize your ideas.' Which problem does that refer to? Yes, 'I don't understand'. This one says,
'Paraphrase your partner's ideas.' Yes, that matches 'My partner doesn't understand.' This one says, 'Retrace the discussion.' Yes, that is for 'We need help to move forward.'

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