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Diving into a Deeper Understanding

Arriving at one goal is the starting point to another.

— John Dewey, *How We Think* (1910)

Everything we do—from getting to know our students, through putting our students in the driver’s seat, to pushing for intrinsic motivation and building creative confidence—is a foundation for fostering deeper understanding in our students. We want our students to be immersed in their learning so that they

- Ask meaningful questions
- Connect information from one context to another
- Evaluate and judge information as it is relevant to their lives
- Understand various perspectives and how they might influence their understanding
- Delve deeper into areas of interest
- Take action on their learning in a meaningful context

Engagement is key. Once we have our students engaged in learning, they naturally drive right off the set course into different routes. They are on a mission; we are sitting in the passenger seat, offering suggestions and giving advice. Occasionally we might insist that they stop and ask for directions, but more often we are smiling with sheer pleasure as they take control. We want our students to be engaged in their learning so they can move past fact-gaining missions and drive into thinking critically.

Critical Thinking

Critical thinking is a fantastic term and one that most people believe in. Everyone wants their students to think critically. But what does that mean? How does that translate into our classrooms? How do we teach it? And how do we know when our students have achieved it?

Critical thinking...

“...[is the] active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends.” — John Dewey (1910)

“...[is] the thinking through of a problematic situation about what to believe or how to act where the thinker makes a reasoned judgment that reflects competent use of the intellectual tools for quality thinking.” — The Thinking Consortium

The Thinking Consortium 2 (at www.tc2.ca) has many resources and ideas for embedding critical thought into the classroom.

“...calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends.” — Edward Glaser (1941)

What do all of these definitions have in common? Critical thinking is

- evaluating information
- extracting meaning
- making a decision

Critical thinking takes a plethora of ideas and distills them into one big idea. We evaluate what we have, analyzing, questioning, coming from different perspectives; we extract meaning from it; and then we make a decision. It is an ongoing process that we are constantly involved in. Getting our students to think creatively engenders many ideas; however, now how do we analyze them to ensure that the idea meets our learning goal?

Once we have the idea, we need to go back to evaluate it:

Does it work? Is there a better alternative?

Will this work for me?

What can I use. What will not work?

If you are reading this book, you too are engaged in critical thinking about how you can change your teaching practice.

Testing it, modifying it, and then changing it is what keeps us engaged.

The key to critical thinking is to make it a vibrant part of the classroom dynamic so that it becomes expected and assumed. It cannot happen only after a unit or each Friday at 10:00. It is alive in the daily activities. Creative thinking is the gasoline that helps drive the students in their learning.

Medium-sized Drive: Finding the Big Idea

DESTINATION

Recognizing the key idea(s) that students will need to take away from a unit.

SHIFT

We no longer expect our students to memorize and retain a series of facts around a unit or concept. But for our students to be able to make future connections to other units or concepts, they all need to finish the unit and have the same essential understandings. In a classroom that uses student-driven learning, helping students to recognize the big idea prior to beginning a task allows a more open-ended approach to coming to those essential understandings. For example, if it is required that all students learn about ancient civilizations, the big idea might be *All ancient civilizations had a form of trade, language, etc.* Rather than focusing the unit tightly on the Mayans, students can explore a civilization of their choice, as long as they ensure they can support the big idea with examples and facts.

SPARK

Engage your students to create. Ask them, *In one or two sentences, what do you think everyone needs to know when they finish this unit?*



UNFOLDING THE ROADMAP

- Finding the big idea is not a process you begin a unit with; rather it is a process you start with your students once they have completed the frontloading and are familiar with the required curriculum objectives.
- Prior to beginning the task, remind students that just one fact about the topic will not tell us all we need to know.
- Ask students to write one or two sentences that could possibly describe the unit. Share the sentences; they will likely be specific fact-based statements. Go through the different statements, asking students to look for similarities among them. Verbs that stand out, nouns that are repeated—these words can help identify a pattern in what information stands out during the frontloading process. With younger children, you might have them find a picture that represents what the unit could be about.
- Begin to guide students toward creating a single statement about the unit. Encourage them to make a broad statement, one that could work for many different parts of the unit and is not specific to one area. With older students, you might allow them to work in small groups to try to create their own statement.
- Write the examples of the big idea in a visible spot in the classroom. I have found sentence-strip papers excellent for writing out big ideas.

CLOSURE

As students continue in their learning, revisit the big ideas; challenge students to distill the various statements into one singular statement that represents the unit. As you work together with your students to prepare the assessment of their learning, return to the big idea. What pieces of information do they need to know to be able to prove that statement is true? For smaller units, they might be able to cite one or two examples to support the big idea; that could be your summative assessment. Don't discard the big ideas as you move on different units and topics; as the year progresses, remind the students of the various big ideas they have formed. Encourage them to look for connections to other topics and areas of interest.

Gathering Information

Provide Structure

To teach our students to think critically, we need to begin by providing a framework they can use. When we teach a multiplication problem, we often give students more than one method to use. We want them to pick a way that works best for their learning. When helping students think critically, we also need to provide them with alternatives.

Breaking the process into steps helps form an outline as you begin and makes the process more tangible for some learners. But stepping back and allowing students to select what might work for them or modifying the plan are equally essential. Here are a few frameworks that you might decide to go with:

FRAMEWORK A

1. Identify purpose or goal.
2. Create a critical question about the goal.

All frameworks are cyclical; we need to bring students back with their end result in their hand. When they evaluate it, do they like the outcome? Do they need to go back to alter it?

3. Assemble the relevant data.
4. Evaluate different points of view.
5. Identify the most viable options.
6. Determine which you will move forward with.
7. Evaluate the decision: Did it work?

FRAMEWORK B

1. Determine the purpose.
2. From the purpose, create a problem or question to solve.
3. List possible assumptions that might impede your perspective.
4. Clarify your point of view.
5. Collect data, information, and evidence.
6. Sort and represent data, information, and evidence in charts and visuals.
7. Critique the information.
8. Draw a conclusion.
9. Evaluate the implications and consequences of the conclusion.

Begin the Process of Critical Questioning

In order for students to ask critical questions, we need to provide background. We need to teach them how to think critically, in a visible and intentional way, so they understand what we are asking. And we need to use their areas of knowledge or provide them with sufficient knowledge to push their understanding, and ours, to the next level.

Being visible about our thought process means that we are explicitly modelling how to think. We are changing the flow of education from being about memorizing facts to being about creating ideas and we are explicitly teaching how to generate and work through those ideas. We are taking the hood off the car and sharing what happens in the engine so students can solve their own problems. Of course, our students are already thinking. But we want to show them how to dive a bit deeper into their flow of thought before jumping to the next idea.

POSTCARD FROM THE CLASSROOM

For our unit on structures, we contacted teacher Heather Love in Thailand for an online video conference. She walked us around their street and showed us what their structures look like. Ms. Love generously offered to hold her laptop while walking in Bangkok and chatting with my students. I turned off the lights and projected the phone call on the interactive whiteboard. What first struck my young students was the darkness. Why was it afternoon here and nighttime there? We had a rich conversation about the sun and the earth's movement. Opening up the world with digital media created many authentic and rich conversations about the earth, structures, and culture that led us into the weeks ahead.