

A Cascading Challenge Approach to Sustained Student Inquiry

Imagine...

Imagine a classroom where students excitedly play with ideas – dreaming up utopias, imagining innovative solutions to challenges facing the world; exploring ways to re-invent, re-interpret and re-think while engaging with concepts, ideas, events and people set out in the prescribed curriculum. While we might like to dream of such a classroom, research suggests we are falling far short. It appears the longer students are in school the less they enjoy being there. Perhaps this is because schools spend too much time teaching answers to be replicated rather than posing challenges that invite exploration and innovation. If learning were driven by provocative challenges it would help to shift the teacher role from a purveyor of knowledge to a choreographer of learning.

Now, further imagine if students were invited to learn through invitations to engage with rich, meaningful challenges that create a cascading flow for the learning. Rather than a myriad of disconnected inquiry lessons over the duration of a unit or course, imagine if students were invited to live with the challenge over time – initiating their learning with a prediction, speculation or initial draft of an idea then continually reflecting on their new learning to affirm, revise or re-orient their thinking as their understanding grows and deepens. By allowing children to explore ideas, extend their understanding and grow their thinking, classrooms can become incubators of innovation where perseverance, risk taking, and curiosity are allowed to flourish. We call this re-imagined approach to learning a ***cascading challenge approach***.

Foundational premises of a *cascading challenges approach*:

- a sustained inquiry approach in which students engage with a rich and meaningful challenge through a series of related smaller inquiries helps to deepen understanding over time;
- teachers need to be transparent so that students are both aware of the broad learning goals and also see the relationship between daily lessons and targets they are trying to hit;
- education needs to adopt a "fail forward" approach in which setbacks are embraced as an opportunity for further learning;
- students should be invited to begin thinking from the outset of a challenge – to ensure thinking is central to the learning process rather than occurring at the end of the teaching/learning process
- Daily lessons must help students build both conceptual and procedural knowledge through lessons that are designed to engage students in “thinking to learn and learning to think”;
- Developing understanding of core concepts, ideas, processes, and information is required for students to engage in the rich inquiry. Building the “basics” through a thinking approach whereby students uncover understanding rather than receive through transmission and rote memorization supports students ability to engage in critical, creative and collaborative inquiry.

Three Keys to the *cascading challenge approach*

1. *Cultivate a culture of inquiry*



- ✓ Inverting the traditional approach so that the invitation to solve a problem is the driver for the learning rather than the culmination for learning.

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- ✓ Frame an over-arching inquiry and an over-arching challenge that will focus the learning and provide a clear target for students
- ✓ Begin with a **learning launch** that invites a prediction, speculation, initial drafting of ideas, or imagining an ideal
- ✓ Identify 2-4 lines of inquiry that will help students develop conceptual and procedural understandings necessary to successfully respond to the over-arching inquiry and challenge
- ✓ Develop a learning map that helps ~~ing~~ students to understand the relationships between the broad learning goals, the lines of inquiry and the daily lessons.

2. ~~I agree about the problematic overlap with the teaching for understanding. Can we find ways to distinguish the chapters more?~~

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1. Create a spirit of inquiry

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~~students know that thinking for themselves not having the teachers or the textbook answer is what matters~~

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Problematize everything

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Make critical thinking a routine part of learning by

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- ✓ a) ~~d~~Developing daily lessons that explore the Lines of Inquiry by through manageable and focused **critical challenges**.

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3. Allow students to affirm, revise or aspire through continual reflection

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- ✓ Encourage ~~meta cognitive~~ reflection and support failing forward (e.g., ~~use of a Thoughtbook in which~~ where students predict, speculate, hypothesize as they learn and then revise, edit, confirm after ~~as their learning~~).

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- ✓ Use the [“cascading challenge”](#) approach to allow for [setbacks or “failures”](#) to be [embraced as opportunities for learning rather than viewed as evidence of shortcomings](#).

Cascading challenge approach – moving forward with the “basics”

Imagine a classroom where learning is grounded in a guided and sustained inquiry approach which flows from invitations to think critically, creatively and collaboratively about relevant and important issues across the curriculum. In building students’ capacity to think and innovate teachers must not lose sight of the need to build students procedural and conceptual knowledge. To cultivate critical, creative and collaborative thinkers invitations to think need to be the routine way students learn. Thinking should not occur at the end of learning; it needs to be the way students learn everyday in every subject. Engaging students in the uncoverage of the curriculum by finding ways to problematize all learning is the key to moving forward without losing sight of the basics. The was developed to put thinking at to core of learning for all students.