

Myths

& Truths

about

Rigor

# What is rigor?

Rigor is one of those slippery concepts in education. Everyone agrees that it is important but very few agree on what it really means. In most cases, people believe that they know it when they see it without really having a fully defined idea of what it looks like.

We often use the term rigorous when we mean “harder” or “more challenging” or “upper level of Blooms” but rigorous instruction, while it includes many of these concepts, is so much more.

Rigorous instruction requires that students “construct meaning and impose structure on situations rather than expect to find them already apparent.” (Resnick, 1987, 44). Rather than reproduce knowledge, they manipulate what they know in order to learn something new from the process.

Most units simply ask what students will know and be able to do by the end of the unit. Rigorous learning units ask what students will understand and how students will be able to think by the end of the unit and they follow a predictable pattern.

It starts with helping students to **acquire** and organize information. Then, teachers ask students to **apply** thinking skills to information and skills students are

learning. Students then begin to **assimilate** individual thinking skills into thinking processes to deepen their consideration of the knowledge and skills they are learning. Finally, students use habits of mind to **adapt** what they are learning to new and novel situations. This process of moving student systematically through acquisition, application, assimilation, and adaptation is what makes instruction rigorous. As a result, students develop an awareness of their own thinking processes and build models for critical and creative thinking.

Thus rigorous instruction goes beyond simply helping students memorize facts, gain a surface understanding of concepts, and develop a basic proficiency of skills. Rigorous instruction asks students to create their own meaning, integrate skills into processes, and use what they have learned to solve real-world problems even when the “correct” pathway is unclear and they are faced with perplexing unknowns.



# Seven myths about rigor ...

Unfortunately, over the years the term ***rigorous*** has accumulated a lot of baggage. The following are seven myths about rigor that may be getting in the way of your ability to implement rigorous instruction.

**Myth One: *If you have rigorous standards, you have a rigorous course.***

Rigor isn't as much about the standards as it is about how you ask students to reach the standards. There are times when students are asked to achieve highly rigorous standards in un-rigorous ways. And other times, teachers are able to take mediocre standards and help students achieve highly rigorous learning by designing rigorous learning experiences that correspond with those standards. The key is to take local and state standards and design rigorous learning units that help students meet or exceed the standards through rigorous learning experiences (you

can download the graphic organizer we use to help teachers do this at [www.mindstepsinc.com/rigor](http://www.mindstepsinc.com/rigor)).

**Myth Two: *Rigor means more work.***

While rigorous instruction may require that students put forth more effort, it is not based on the volume of work students complete. Rigor is about the quality of the work students are asked to do, not the quantity. More assignments or more reading does not guarantee more rigor. In fact, rigorous classrooms often have less assignments and homework. The focus is not on the quantity of assignments but on the quality of those assignments.



### **Myth Three: *Rigor means harder.***

Rigorous classrooms do present more challenge to students but there is a difference between challenging and difficult. Challenging work asks students to stretch and reach for new understanding. It asks students to grapple with material and make meaning for themselves. And, it requires careful scaffolding and support to be effective.

Work can be difficult however for a variety of reasons including unclear instructions, a lack of necessary resources, a lack of adequate support, demands that are too great for the time allotted, etc. We can all think of assignments we endured that were difficult without being intellectually challenging. Thus, it is a mistake to think that just because students had difficulty completing their work, they have engaged in a rigorous assignment. Focus on providing students more challenging assignments, not just harder assignments.

### **Myth Four: *Rigor is a matter of content.***

Just because you select highly rigorous content does not guarantee a highly rigorous learning experience for students. How you ask students to engage in the content also determines the level of rigor for your course. We've seen teachers who use highly rigorous content in un-rigorous ways and teachers who have used what would be considered low-level content in highly rigorous ways. Although it

is important to provide students with content that is rigorous, how you ask students to think about the content is even more important.

### **Myth Five: *Younger students cannot engage in rigorous instruction.***

Even young children can think and interact with material in highly rigorous ways. In fact, left to their own devices, children naturally take what they are learning to solve unpredictable problems and deal with uncertainty. Doing so is at the very nature of rigorous learning. The key is to make sure that your rigorous instruction is developmentally appropriate.

Build younger students' capacity for rigorous thinking and learning early by designing instructional experiences that not only lay the foundation for helping students deal with ambiguity and complexity, but help students develop learning strategies, thinking skills, and thinking processes. (Appendix A of *How to Plan Rigorous Instruction* has a chart that shows you how to implement rigor in a way that is developmentally appropriate for early elementary, late elementary, middle, and high school).



***Myth Six: In order to engage in rigor, students must first master the basics.***

Rigorous thinking is involved in learning even the most basic material. Students can learn the basics in highly rigorous ways. They can learn how to build adequate representations, organize those facts in some way, analyze and construct relationships among those facts, and make inferences beyond what is explicitly presented *while* they are mastering the basics.

Rigor is not something that starts after students learn basic concepts; how you help students master the basics can in and of itself be a highly rigorous process.

***Myth Seven: Rigor is for the elite.***

All students can and should have access to rigorous instruction and learning. To reserve rigorous learning opportunities for an elite group of students while relegating others to lives of memorizing disconnected facts and blindly participating in meaningless activities is to leave them unprepared to meet the demands of a 21<sup>st</sup> century and beyond.

Even your most disconnected, unprepared student can master rigorous thinking. The key to helping every student master rigorous thinking and learning is to build student's capacity for rigorous thinking systematically by moving them through rigorous acquisition, application, assimilation, and adaptation.

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## Think About ...

Which of these myths do you currently believe?

What are other myths about rigor?

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# The truth about rigor ...

The truth is, planning and facilitating rigorous learning experiences is one of the most rewarding things you can do as a teacher. Not only do you get to engage students in meaningful learning, you help students learn how to learn for themselves. Your class discussions are much more lively, your assignments are much more interesting, and your students are much more involved in the class.

Rigorous lessons allow you the chance to take your students more deeply into your subject and give you a way to manage the messiness of learning. If you are unsure whether or not instruction is rigorous, here are a few ways that you can tell:

## ***Rigor asks students to make nuanced judgments.***

Rigor helps students understand that there may be several solutions to a problem each with costs and benefits. Rigorous instruction helps students learn to choose from a range of available options. They consider and apply multiple and often conflicting criteria and wrestle with shades of

meaning in order to come to a final solution or conclusion. And, students learn defend their choices effectively even when there is no clear “right” answer.

## ***Rigor requires effortful learning.***

Students cannot be passive recipients of knowledge. They must work at learning. They must make meaning on their own. Rigor requires a considerable amount of mental work as students make meaning and impose structure on apparent disorder. While we do not let students struggle unproductively, we do leave them space to work through problems on their own, providing only enough scaffolding and support to help them eventually learn how to solve problems for themselves.



### ***Rigorous learning is intentional.***

Students are asked to strategically pursue a learning goal. They must build on prior knowledge, make informed choices and impose structure on situations in order to help them arrive at their learning goals. In rigorous classrooms, students are not passive recipients of knowledge. They are actively engaged in analyzing, synthesizing, and evaluating ideas for themselves.

### ***Rigor involves uncertainty.***

Not everything that students need to know is readily apparent and the “right” answer is not obvious. In fact, there may not be one right answer at all. There may be several right answers and students must grapple with ambiguity. And, because rigorous instruction asks students to take learning paths that are not tightly scripted, there are times when not even the teacher knows exactly what will happen next.

The “correct” path is not visible from any single vantage point. Rigorous instruction allows you and your students to embrace the messiness of learning. As a result, students are able to make their own meaning and learn not only how to learn, but how to apply and adapt what they learn to new and novel situations.

### ***Rigor requires self regulation.***

Students must learn to manage themselves strategically and to think metacognitively in order to engage in rigorous thinking and learning. Rigorous

learning is mindful. Students reflect on what they are learning and on their learning process. They learn how to tell when they are confused, how to select appropriate strategies, how to pace themselves, when and how to ask for help, how to persist through frustration, and how to tell whether they are struggling productively or destructively.

### ***Rigor is relevant.***

Students develop knowledge and skills that have value beyond school. They don’t memorize facts or acquire new skills without also understanding their real-world application. That doesn’t mean that every learning experience results in a direct real-world experience but it does mean that even when students are engaged in simulated activities or practice exercises, they can make the connection between their practice and the actual application in the real world.

### ***Rigor is relative.***

There is no absolute value for rigor. Rigor exists within but at the outer edge of students’ capabilities. While we are careful to keep instruction within but at the outer edge of students’ capabilities, we are constantly looking for ways to help students stretch beyond their current abilities. Rigor therefore, is not inherent in the content or instructional strategies themselves. Rigor is in the reach. And that reach looks different for each student, in each grade level, and within each discipline.



Rigor is...	Rigor is not...
For every student	For select students in GT, honors, or AP/IB programs only
Challenging	Difficult
More effort	More work
Quality of assignments	Quantity of Assignments
Messy	Tidy, scripted learning
Heuristic	Algorithmic
Unpredictable	Predictable
Infused in all levels of learning	Reserved for the upper level of Bloom's Taxonomy

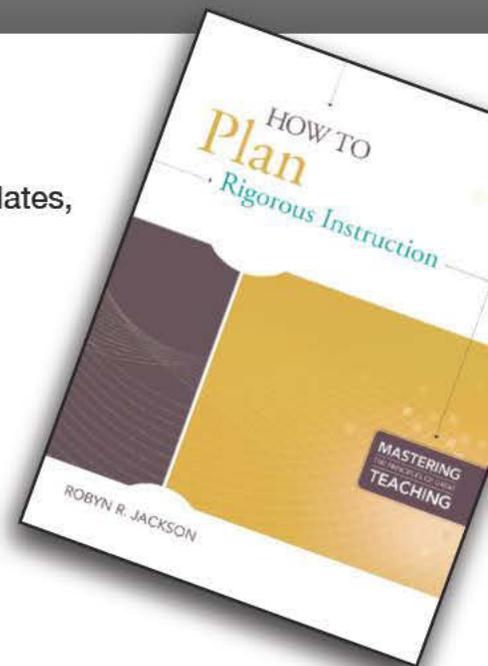
## Yes, I'm ready for more RIGOR!

For more on rigorous instruction:

-  Check out our resources on rigor including webinars, tutorials, templates, and much more at [www.mindstepsinc.com/rigor](http://www.mindstepsinc.com/rigor)
-  Purchase *How to Plan Rigorous Instruction* [here](#).
-  Schedule one of these workshops for your school or district [here](#).

Your first consultation is FREE !

- An introduction to rigorous instruction
- Rigor Two-Day Workshop
- Rigor Series
- Rigor for Instructional Leaders



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## ABOUT MINDSTEPS™

Mindsteps™ Inc. is an educational consulting firm that helps teachers, administrators, and school systems figure out how to make sure that the methods they are using to improve student achievement produce the desired results. We use a few core principles to help our clients get to the root of what's not working and to develop more effective ways to help ALL their students achieve.

Mindsteps™ Inc. has helped hundreds of teachers and administrators improve student achievement through its workshops, seminars, free materials, books, and consulting services.

We use a simple set of timeless principles to help educators diagnose their challenges and develop an action plan to resolve them. We won't suggest a solution until we are clear about who you are and what it is you are facing. We offer workshops, on-site coaching, consulting, and administrator training.

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