

# Instructional Strategies That Push Students To Own the Thinking

Even in classrooms where we saw grade-appropriate assignments, we often observed students missing out on opportunities to do the rigorous thinking those assignments required. This included classrooms where teachers did most of the talking, where students were asked only simple questions that didn't require critical thinking, or where they were given the answer before they had enough time to do the work themselves.

Giving students more frequent opportunities to be responsible for “doing the thinking” not only helps them build the knowledge and skills they need to deeply understand the content, but can also build students’ motivation in school and lead to deeper engagement in their learning.

So how do we do this? On top of starting with grade-appropriate content (a prerequisite for supporting students’ academic growth), the following strategies can be implemented in any classroom to give all students the chance to grapple with challenging cognitive work during their daily lessons.

- Proactively build academic mindsets with your students.
- Set clear behavioral and academic expectations for student participation and work.
- Ask questions and assign tasks that require critical thinking.
- Give all students a chance to do the work.
- Check for understanding frequently and strategically.
- Hold high expectations for student responses and ask targeted follow-up questions.
- Facilitate academic discussion and feedback among students.

Visit the [Mindset Scholars Network: Research Brief](#) for ways to create a safe and motivating classroom culture.

## Strategy 1: Proactively build academic mindsets with your students.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>• Build a classroom culture where students feel comfortable making mistakes in the name of learning and their academic progress is celebrated.</li> <li>• Explicitly teach students about growth mindset and the malleability of intelligence.</li> <li>• Provide “wise feedback” to students that not only communicates high academic expectations but also assures the student they can meet those expectations.</li> </ul>	<ul style="list-style-type: none"> <li>• EL Education <a href="#">Building the Culture and Structure of “Crew”</a></li> <li>• Edutopia <a href="#">growth mindset teaching resources</a></li> <li>• Teach Like a Champion technique: <a href="#">Culture of Error overview and example phrases for building a culture of error</a></li> <li>• Intervention Central <a href="#">How to Help Students Accept Constructive Criticism: Wise Feedback</a></li> </ul>

## Strategy 2: Set clear behavioral and academic expectations for student participation and work.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>Establish routines so students are engaged in work throughout the lesson (including during key transition points such as the start of class or when students finish working on an assigned task).</li> <li>Implement protocols for how students should complete specific types of work or activities they will engage in regularly, such as how to annotate text or participate</li> <li>during small group work. Set aside time to teach students the protocols when first introducing them and time for students to reflect on their engagement with the protocols on an ongoing basis.</li> <li>Provide students with examples or rubrics that illustrate what strong participation and work products look like.</li> </ul>	<ul style="list-style-type: none"> <li>Teach Like a Champion techniques:               <ul style="list-style-type: none"> <li><a href="#">Do Now checklist</a></li> <li><a href="#">Installing a Procedure while Teaching Content</a></li> <li><a href="#">Rolling Out Discussion Procedures</a></li> </ul> </li> <li>EL Education <a href="#">“The What, Why and How of Protocols”</a></li> <li>(including <a href="#">instructions</a> and <a href="#">videos</a> for dozens of protocols)</li> <li>Great Minds <a href="#">Wit &amp; Wisdom Implementation Guide</a> English language arts (ELA) instructional routines (pp.96-109) and writing, speaking, and listening rubrics (pp.120-161)</li> <li>University of Pittsburgh Institute for Learning <a href="#">Accountable Talk Sourcebook</a> instructional routines and talk formats (pp.16-26)</li> </ul>

## Strategy 3: Ask questions and assign tasks that require critical thinking.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>Use the language embedded in grade-level standards to plan questions and tasks that require the appropriate level of thinking for your target standard(s).</li> <li><i>For lessons that involve a text:</i> Pose text-dependent questions that focus on the most important details or ideas in a text to deepen students’ understanding of what they read.</li> <li>Plan activities that immerse students in real-world problem-solving and prompt them to explain and justify their thinking.</li> <li>Ask more open-ended questions than closed-ended questions. After asking a closed-ended question, follow up with open-ended questions (such as “How did you get that answer?” or “Why do you say that?”).</li> </ul>	<ul style="list-style-type: none"> <li>For lessons that involve a text:               <ul style="list-style-type: none"> <li>Achieve the Core <a href="#">Guide to Creating Text-Dependent Questions</a> and <a href="#">sample literacy lessons</a></li> <li>Teach Like a Champion <a href="#">establishing meaning via text-dependent questions</a> and <a href="#">daily template for close reading</a></li> </ul> </li> <li>Math:               <ul style="list-style-type: none"> <li>Achievement Network <a href="#">Targeting Aspects of Rigor in Math Instruction</a></li> <li>Dan Meyer’s <a href="#">library of three-act math tasks</a></li> <li>Gates Foundation Math Design Collaborative <a href="#">formative assessment lessons and summative assessment tasks</a></li> <li>KIPP <a href="#">video on cognitively guided instruction</a></li> </ul> </li> <li>Science: <a href="#">NGSS Classroom Sample Tasks</a></li> </ul>

### Strategy 4: Give all students a chance to do the work.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>When asking questions to the whole class, ensure that all students are responsible for coming up with the answer before you call on someone to respond.</li> <li>Set the expectation and provide the materials so that all students respond when answering non-verbally (for example, showing written responses on whiteboards or holding up fingers to represent multiple-choice answer options).</li> <li>Assign roles to each student when working in groups to ensure that all students participate.</li> </ul>	<ul style="list-style-type: none"> <li>Teach Like a Champion techniques: <a href="#">Wait Time</a>, <a href="#">Cold Call</a>, <a href="#">Everybody Writes</a>, <a href="#">Formative Writing</a>, <a href="#">Art of the Sentence overview</a> and <a href="#">3rd grade example</a></li> <li>EdWeek's <a href="#">Total Participation Techniques: An Interview with Pérsida &amp; William Himmele</a></li> <li>University of Pittsburgh Institute for Learning <a href="#">Accountable Talk Sourcebook</a> norms for equitable participation (pp.32-35)</li> </ul>

### Strategy 5: Check for understanding frequently and strategically.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>Plan to check for understanding of each of the key concepts and/or components in your lesson to make sure students are on track throughout the entire class.</li> <li>Vary the ways you ask students to demonstrate understanding to allow for different learning styles and to engage students with the content in multiple ways.</li> <li>Use specific checking for understanding strategies for the appropriate purpose (for example, thumbs up/down is <u>not</u> a reliable check for understanding of content, but it can be effective for showing agreement/disagreement).</li> <li>Prompt students to monitor their own understanding</li> <li>and take action when they share that they need support.</li> </ul>	<ul style="list-style-type: none"> <li>Teach Like a Champion check for understanding examples: <a href="#">3rd grade</a>, <a href="#">4th grade</a>, <a href="#">7th grade ELA</a>, and <a href="#">7th grade science</a></li> <li>EL Education <a href="#">check for understanding strategies and videos</a></li> <li>The Teacher Toolkit <a href="#">check for understanding strategies</a></li> </ul>

## Strategy 6: Hold high expectations for student responses and ask targeted follow-up questions.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>• Draft exemplar responses for questions/tasks to clearly define the bar to which you will hold student responses.</li> <li>• Set the norm that students are responsible for answering questions and cannot “pass” because they don’t know or don’t want to answer.</li> <li>• When students give incomplete or overly simple responses, ask follow-up questions to lead students to a more complete and accurate response.</li> <li>• When students make an error, ask probing questions to determine the source of their error and help them respond correctly.</li> <li>• Address trends in misconceptions or errors that you observe in multiple students’ work with the whole class.</li> </ul>	<ul style="list-style-type: none"> <li>• Teach Like a Champion techniques: <a href="#">No Opt Out</a>, <a href="#">Right is Right</a>, <a href="#">Break It Down</a></li> <li>• EL Education <a href="#">conversation cues</a></li> <li>• University of Pittsburgh Institute for Learning <a href="#">Accountable Talk Sourcebook</a> practices that support accountability to accurate knowledge and rigorous thinking (pp.30-32)</li> <li>• Inside Mathematics video examples of Standards of Mathematical Practice <a href="#">#6</a> <a href="#">#8</a></li> </ul>

## Strategy 7: Facilitate academic discussion and feedback among students.

Teacher Actions	Resources
<ul style="list-style-type: none"> <li>• Give students many chances to informally share their thoughts and work with one another in every lesson (such as “Turn and Talk” or “Think-Pair-Share” where students discuss briefly with a partner).</li> <li>• Incorporate opportunities for students to participate in formal discussions or problem-solving protocols in class, and teach students how you want them to participate in such activities.</li> <li>• Give students a chance to discuss and give feedback on each other’s work.</li> </ul>	<ul style="list-style-type: none"> <li>• Teach Like a Champion techniques: <a href="#">Habits of Discussion</a>, Show Call <a href="#">7th grade math example</a> and <a href="#">8th grade reading example</a></li> <li>• Teaching Channel videos <a href="#">Strategies for Student-Centered Discussion</a> and <a href="#">Participation Protocol for Academic Discussions</a></li> <li>• Great Minds <a href="#">Wit &amp; Wisdom Implementation Guide</a> Socratic Seminar guidance (pp.89-95)</li> <li>• Teach Thought <a href="#">sentence starters</a></li> <li>• Inside Mathematics video examples of <a href="#">Standard of Mathematical Practice #3</a></li> <li>• EL Education video <a href="#">Speed Dating Protocol</a></li> </ul>

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