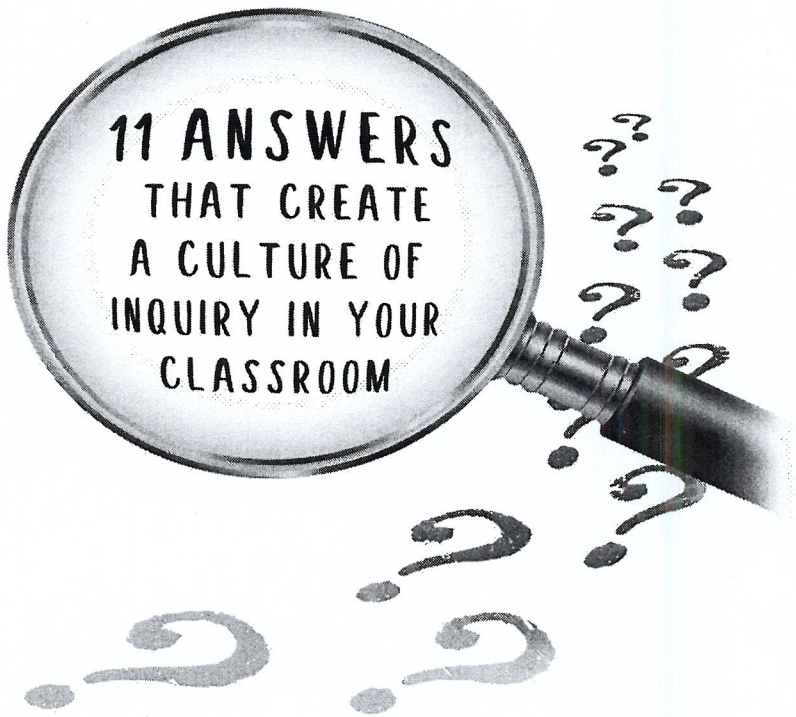
Hamilton (2019) — Questions_ Chap 1

HACKING QUESTIONS



HACK™ Learning SERIES

Connie Hamilton

(2019)

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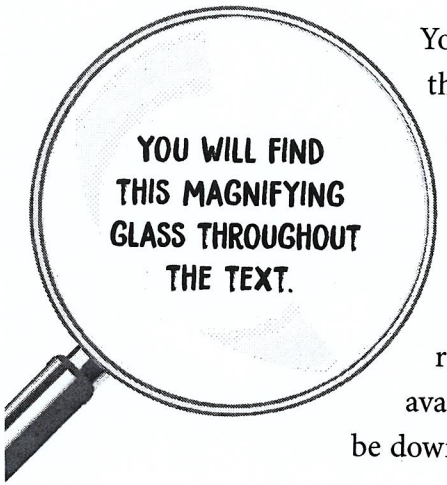
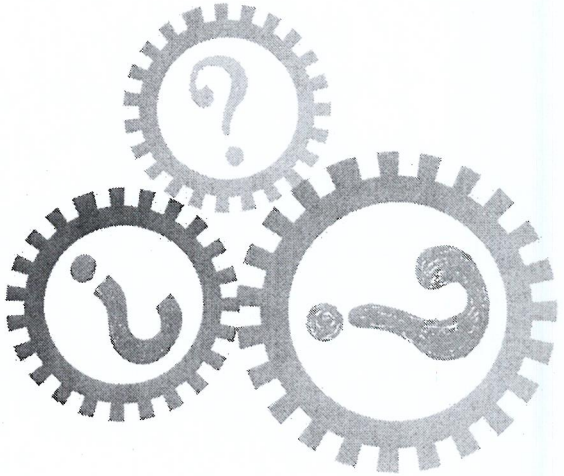
others. As you read each chapter, it might spur other wonderings or thoughts about questioning. For example, it would be incomplete to talk about how to facilitate student collaboration without referencing the teacher's role during that time. In this book, those strategies are two different Hacks that build upon one another. If you find a Hack of interest and want to go deeper, keep reading. There are opportunities to connect throughout the chapters.



You will find this magnifying glass throughout the text. The image serves as a suggestion to take a closer and deeper look at the message. In the lens, you'll find words of caution, words of wisdom, and teacher tips. Many of the resources referenced in the Hacks are also available in high resolution and can be downloaded at HackingQuestions.com.



HACK 1

ASSUME ALL HANDS ARE UP

EXPECT THAT EVERY STUDENT WILL ENGAGE

Tell me and I forget. Show me and I remember.
Involve me and I understand.

— Chinese Proverb

THE PROBLEM: TEACHERS SOLICIT ENGAGEMENT THROUGH HAND RAISING

A great debate exists between whether or not teachers should cold-call students or allow them to volunteer to respond. Arguments in favor of cold-calling suggest that the element of surprise keeps students on their toes. Those opposed to this practice, however, are sensitive to the emotional side of how students feel when they're called on and don't know the answer. Let's explore the most common results of encouraging hand raising in the classroom.

After a teacher asks a question to a class, one of three things usually happens:

1. A single hand shoots up and the teacher quickly calls on that student.
2. Several students raise their hands and the teacher either tries to vary who to select, or chooses the student most likely to respond accurately.
3. Crickets.

In the first example, where a star pupil straightens an elbow toward the ceiling, we tend to see the same hands up over and over again. This results in a small group of learners monopolizing the interactions. But teachers often feel guilty for *not* calling on those eager beavers who always seem willing to learn and are consistently engaged. They may sigh loudly when the teacher doesn't select them to share, and flop down their hands in disappointment.

The problem is, without intentional strategies for addressing how to select volunteers, and making sure that you're selecting from the entire group, a classroom can change from a learning group of twenty-eight to a smaller group of eight, with twenty silent observers.

At other times, a teacher floats a question to the class and a sea of waving hands shoots up in the air. Now the issue is *whom* to choose. One thought is to select the student who does not usually participate. The notion is that rewarding the effort to join the learning will carry over to future lessons and increase that student's willingness to take a risk. Yet what we are unintentionally validating is that the student can choose when to engage. Hand up: Yes, I want to share. Hand down: Leave me out of the learning. Commonly, teachers will select three or more students to share their thinking with the

class, even if twenty hands are in the air. While this increases the percentage of active, engaged brains, we are still only hitting the 10-percent mark when it comes to getting students involved.

Then there is the dreaded silence. It can be deafening. If no students respond, three top reactions include:

1. Catching students off guard by calling a name in hopes that a student will offer a thought.
2. The Bueller response begging for "anyone?...anyone?" to break the silence.
3. Or worst of all, we end up answering our own question.

Look at it this way: If it is worth pausing to ask one student, isn't it worth asking them all?

The assumption, when there's no response, is that the question is too difficult, or maybe was unclear. We get inside our own heads and start wondering how in the world they could possibly not understand. Then we automatically jump into reteaching mode. You have just called on your most knowledgeable student: YOU!

When your questioning purpose is to check for understanding before moving on with the lesson, a sampling of students is likely insufficient data. Generalizing that the whole class "gets it" based on the response of a select few is a recipe for disaster. Triggering each and every student to provide evidence that they are learning along the way will provide you with a better indication of what your next steps should be. Too often, teachers wait until the end of the lesson—or worse, the end of the unit—to assess student comprehension. Look at it this way: If it is worth pausing to ask one student, isn't it worth asking them all?

What all of these circumstances have in common is that the question is posed for the purpose of getting an answer so the lesson can move on. By soliciting volunteers and getting a quick answer from a small sample of students, teachers feel validated that the lesson is going well, and they continue forward. This process is flawed. As we've seen, this isn't a true sampling of the entire classroom. Plus, the strategy of requiring students to raise their hands to respond to a question sends a message that a student should have a prepared and accurate reply *before* speaking. This discourages full engagement and focuses attention on the students who already know the answer, allowing confused students to get lost along the way. And you won't know it until it is too late.

We have to find a more efficient, more effective way of assessing the entire class's understanding of a lesson, and to do that we need to learn to present questions in a different way.

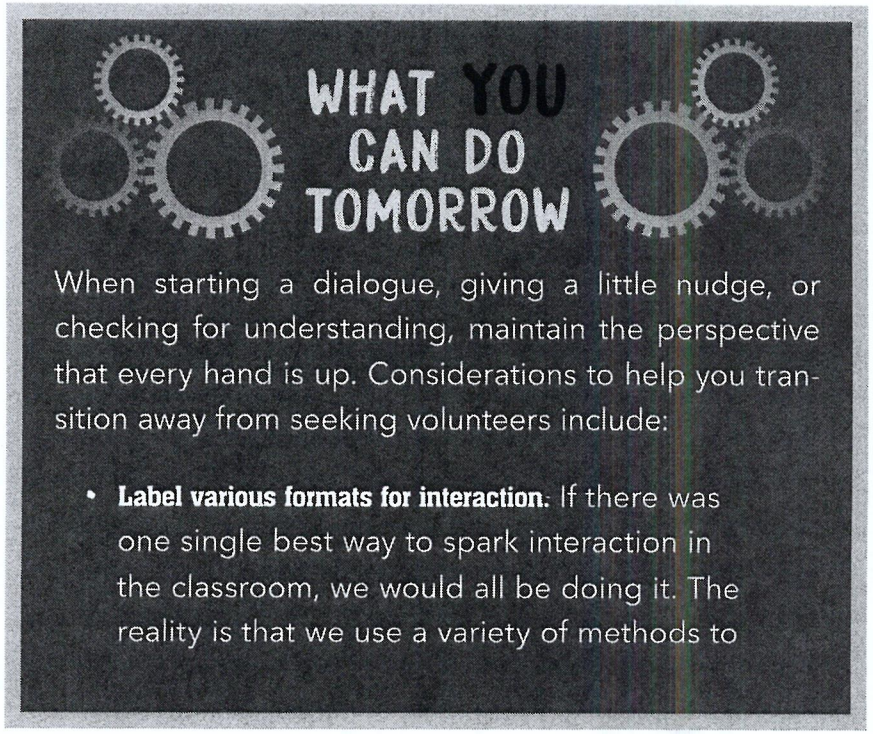
THE HACK: ASSUME ALL HANDS ARE UP

Rather than taking a side on the cold-calling debate, adopt the mindset that every learner can and should engage in thinking. This includes the whole class, small groups, and independent structures for instruction. Would you ever pose the question, "Who chooses to learn today?" then accept only five hands? No! Occasionally, hearing one voice at a time might be your method of choice, but it should not be your default strategy to call on single students to confirm that the whole class understands.

The hacky part of this practice is not the actual protocols. Think-Pair-Share, hold up visuals, movement, and similar strategies are tried-and-true practices that educators have been using for decades. No, the message for this Hack is that we need to think about all students interacting as the norm, not the exception. Plan

your lessons with the intention of finding logical points for pauses. Then assume all students are as ready and eager to participate as Hermione Granger, waving their hands in the air in the hopes of showing off their studious personas. Prepare an activity that gives dignity to all students by creating the opportunity for 100 percent of them to be "chosen."

Disengagement is the enemy of learning. We unintentionally create the conditions for disengagement when we allow students to keep their hands down. Assuming that all hands are up creates a culture in the classroom that is inviting to the entire population. You will send the consistent message to your learners that you expect everyone to join the journey to success. No one is singled out … and no one is *left* out.



engage students. Sometimes we accept students responding freely, and sometimes we want them to hold off until they're prompted to engage. Teach students a few protocols for responding so that they know what to expect, and then access these triggers by name. Here are a few common formats:

- **Blurt time.** Invite students to give their thoughts as they come to mind without needing permission to share. Blurting is ideal for times when the class is recalling information to activate prior knowledge, or brainstorming ideas. The benefit of blurt time, sometimes called "popcorn response," is that attention isn't focused on an individual student. It is typically fast and efficient, and it raises the energy level of the entire class. Students also learn the skill of listening for the lull to be sure their voices are heard. During blurt time, discussion is usually reserved until all the ideas are on the table. Then they can be processed as a collective whole. During discussion, common ideas can be lumped together, and misconceptions can either be explored or noted by the teacher to debunk in the near future.

- **Take volunteers.** This Hack is not about abolishing hand raising, but about being more intentional with how it is used. At times, you'll need a volunteer, including when you're demonstrating a point or completing a job such as passing out materials. Asking students who can share specific experiences is another example of when you would tell students you are going to solicit volunteers. If you launch with, "I'd like a volunteer to," you will reinforce that hand raising is not the norm in your classroom.
- **All hands up.** Communicate to students that you assume they always have their hands up. When you make *all hands up time* different from *blurt time*, for example, you prevent potential management issues with students shouting out answers when you are planning a quiet think time. When students are warned in advance that it's an all hands up portion of the lesson, they know the expectation is that all will be engaged in active thinking and learning—and waiting their turn. Then you can randomly select anyone, or use a strategy to have all students responding. One such strategy

is Stop and Jot, where students use a journal, whiteboard, or laptop to write down key points they are learning and document any questions they have.

- **Take time for talk.** Instead of posing a question to the entire class and asking one student to respond, pose a question to the entire class and allow the entire class to respond in partners. Create shoulder or elbow partners in your class. Identify an A and B partner. Some teachers of younger students have pairings like peanut butter and jelly partners. Having A/B partners also allows you to facilitate who asks and who responds, mixing it up to give each partner equal talk time.
- **Change stems before questions are posed to the whole class.** How you position a question can influence the comfort level students have in contributing their thoughts. Questions that assume that students are processing their new learning can make all the difference. Consider opening a class discussion with, "What are you wondering about?" or "How are you making sense of this?" These questions are more metacognitive, and invite students to think about their thinking around the content without expecting that they have already processed it. Instead of prefacing

a question with, "Who knows …" try beginning with "Who can start us off in thinking about …" Then let the conversation flow naturally. Discourage students from raising their hands to contribute to the conversation, and manage the flow by using accountable talk stems (see Hack 7: Make Yourself Invisible).

- **Use equity sticks or randomization selection.** Use a simple jar of popsicle sticks to keep students from feeling like you are picking on them or avoiding them. Put each student's name on a stick. Secondary teachers, either keep a jar for each hour or assign numbers to each student and reuse the same jar each class period. Start with all of the sticks in a paper cup inside the jar. After you choose a name or number from the jar, instead of removing the stick from the jar altogether, just place it outside of the cup. This will help you keep track of students who have been called on without making it obvious. If you want to allow for students to be called on more than once, remove or ignore the small paper cup. Digital apps such as Pick Me and Random Picker can provide the same result as the jar-and-stick option.
- **Arrange your room so students can see one another.** The way the seating is set up in your classroom

sends an immediate message about the expectations. It is polite to make eye contact with the person who is talking. If your classroom is set up in rows facing the front of the class, you're implying that the teacher is the center of the discussion. If your goal is for students to bounce ideas off one another and engage in conversation, make sure that they don't have to turn around to look at the speaker. Consider the three room arrangements in Image 1.1. Each of these designs equalizes the opportunity to give attention to everyone, and keeps the teacher away from center stage. When students can see their peers, they are more likely to be active in the lesson.

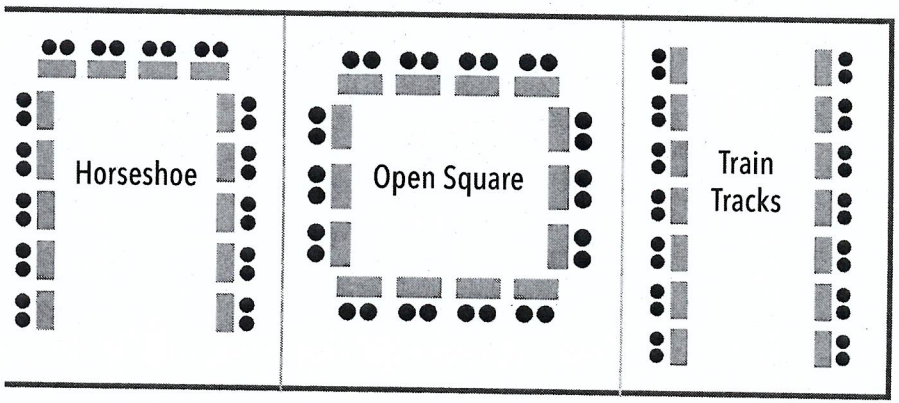


Image 1.1

A BLUEPRINT FOR FULL IMPLEMENTATION

Step 1: Explore the perfect spot for engagement.

Before you implement an all hands up, think about when it best fits in your lesson. Oftentimes, students are not invited to visibly engage until the end of a lesson, video, or lengthy text. Look within longer chunks of time to find a natural stopping spot to be sure students are cognitively engaged. Waiting until the end to find out that students were confused or tuned out is too late.

At no time should students be asked to sit and listen for longer than ten minutes. For younger students, the time limit should be even less. If the lesson you have planned for the day is heavy on establishing surface-level knowledge, identify points where you can stop and allow students to process. Think of their working memory like a water pitcher, where the water is the information you are sharing with them. Once the pitcher is full, it either needs to leak water out, or be set aside for storage. It will overflow if you pour in additional water too quickly. It won't be retained.

The answer is to let them pour the information into another container by giving them time to process the content through cognitive engagement. In this case, the exchange is from short-term to long-term memory. They move the learning from working memory (think of this as temporary) to a place where they can retrieve it later, by giving it meaning or making connections to information they already know. Once they transfer the "water" to a different part of the brain, the working memory is ready to receive new information.

Design your lesson to allow these pauses—including all hands up—*during* discussions, rather than at the end of class.

Step 2: Craft your question(s) in advance.

In order to be clear and targeted, work out the semantics around how you will pose a question related to the content. Think about how to word the question so it is concise, and you will reduce confusion for students—which is important if you're assuming that all hands are up, and all students are ready to answer. Being thoughtful with your question in advance will also maximize your instructional time and reduce the wasted time involved in rephrasing.

Step 3: Choose a strategy that assumes all hands are up and permits every student to respond.

Now that you have a placeholder and questions ready for an all hands up, it's time to choose a strategy. Consider several factors when selecting the best fit for your time slot. Here are guiding questions to ask yourself when mining protocols:

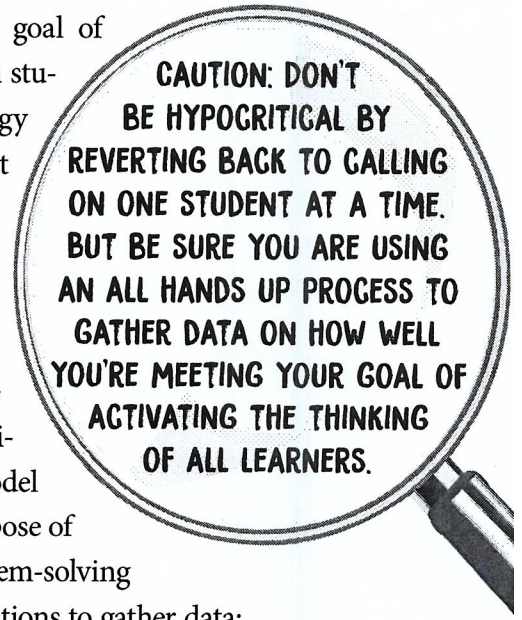
- How many students will be actively thinking?
- Do I need tangible evidence (like paper or video)?
- How quickly do I need the information?
- How much time do I have for the all hands up?
- How long have students been sitting?
- What phase of the lesson are we in (activating prior knowledge, applying, or reflecting)?
- Will students need to access their thinking later?
- What is the purpose of the all hands up (engagement, note-taking, brainstorming)?

- What materials are necessary for the protocol? Are they available?
- How complex is the protocol? Am I looking for something quick or a protocol that will assist them in processing their thinking?
- How many questions do I have?
- Is the protocol familiar or do I have to teach it?

Knowing the answers in advance will help you craft your protocol to best suit the students, and build the best success with your all hands up session.

Step 4: Gather feedback about engagement.

There is no need to keep your goal of having all hands up a secret from students. When trying a new strategy in your classroom, remember that it might not work perfectly the first time. Instead of throwing it out, invite students to identify what worked and what you could do to refine the process. This type of reflection invites metacognitive thinking. Bonus: You can model how to seek feedback for the purpose of continuing to grow *while* problem-solving in your classroom. Try these questions to gather data:



- What activities did you participate in today that caused you to think about your learning goal?

- How did _____ (label the thinking activity) help you meet our learning target?
- How were you able to practice your new learning today?
- What will you remember about today's lesson?
- Were there any portions of the lesson when you felt more or less included?

OVERCOMING PUSHBACK

As you move toward designing lessons that include all hands up, rebuttals might surface. Consider a deeper look at the argument. Calling on one student at a time still is not the best option in most cases.

Calling on a student who is not listening is one way to get the student's attention. This is a direct violation of Hack 11: Create a Safe Zone. If you know the student is not paying attention and you call her out by asking a question like, "Isabelle, what do you think about what Sylvia just said?" you have a mismatch in the question and its purpose. You are using a discussion prompt to address a management or behavior issue. The short-term reaction might be a sudden jerk to attention, which is the result you are seeking. Isabelle is going to have to admit that she wasn't paying attention, or you are going to battle an "I don't know" (IDK) response.

The deeper implication of calling on a student to answer a question you know darn well she is not prepared to answer is that you break down trust and reduce the rapport you have with her. You gain the perception of engagement, but only through the threat of humiliation. Instead of asking her to respond to another student's answer, try matching the question to the purpose.

"Isabelle, did you hear what Sylvia just said, or would you like her to repeat it?" This question addresses the assumption that Isabelle wasn't listening, respects her dignity, and holds her accountable for re-engaging in the discussion without triggering a defense mechanism. This type of question is a forced choice. Options are provided as possible answers to limit the response, and either answer has a natural follow-up. If Isabelle says she heard Sylvia's comment, then you can ask her to respond. If she would like Sylvia to repeat the comment, then Isabelle is more likely to be attentive and rejoin the learning, which is the goal.

Sometimes I want to hear multiple students' responses. Before hearing one response at a time, give students the opportunity to craft their narratives and even practice in a brief partner talk. This will make for more articulate and complete responses. When you have multiple students share, "airplane stacking" can save time. Airplane stacking is a strategy where you identify the students who will share all at once before the first student gives his or her thinking. Much like an air traffic controller identifies what plane will take off first, second, and third, the teacher chooses students to share in order. Instead of stopping after each response to choose another perspective, select them all up front. Students who struggle with speaking in a group or have language barriers can benefit from being third or fourth in the lineup. If they are stumped when it is their turn to speak, they now have the option to agree/disagree or paraphrase what someone else said.

If I assume they are willing to respond and they do not know the answer, we are in another pickle. Remember, it is not always about students knowing the answer. We want them to turn on their brains and think, not simply regurgitate correct answers. It is okay for students to not know the answer. Just set an expectation that

everyone is expected to seek understanding and new learning. Hack 2: Kick the IDK Bucket, is dedicated to providing solutions for when students give "I don't know" responses.

Some kids are painfully shy and speaking in front of the class causes anxiety. Here is where knowing the root cause for the IDK is helpful. This situation is less about the learning and more about the social and emotional impacts. Therefore, your action should match the student's need. In this case, break the rule of thumb regarding spoon-feeding and affirming answers. Your goal is to orchestrate a successful interaction between the reticent student and the class. Instead of surprising this student with a cold-call, offer a Turn and Ask for the class to be that student's partner.

During your interaction with them, give positive reinforcement around their response, then request that they share with the class. The key is to not change up the question. The student is literally repeating the response given to you in the one-on-one exchange to the whole group. If the student is not ready for the whole group, create a foursome and ask the student to share in a small group, but one that includes peers. Then, after they've experienced positive responses from peers, ask again for them to share with the whole class. If the student still is not comfortable, one of the peer group members can paraphrase what the reserved student said. Over time, you will see an increase in the student's willingness to share as the student experiences safe interactions with open and accepting responses from the class.

Posing questions with short responses is another way to create an atmosphere where all students are expected to participate, yet you are honoring the dignity of more bashful learners as well. Slowly increase the students' stage time to help them gain more comfort in their speaking. Some might suggest alternatives to

public speaking, like allowing students to use writing, video, or other more private options. These alternatives to class participation give you an opportunity to see and hear a student's thoughts. They do very little, however, to support the life skill of being an effective communicator. When you can separate content learning from social skills, you will avoid scaffolding the wrong need. Shy students don't necessarily need strategies to help them with content. Many times, the barrier is their fear of talking in front of peers. A match of interventions to the problem will lead to building their efficacy. This helps them become more confident and shows what they already know.

THE HACK IN ACTION

In her classroom, fifth-grade teacher Mrs. Michelle Perkins from Central Elementary School uses a variety of ways for students to engage in questions without hand raising at all—though the methods do assume that all students are engaged all the time. When she's teaching the Question-Answer Relationships (QAR) tool, as shared in Hack 6: Fill Your Back Pocket, Mrs. Perkins uses five intentional strategies to engage all learners, and one more when she sees the need.

When she shared the outline of the lesson with her CIFT and me, she specifically noted that she plans portions of her lessons when students will be using Clock Partners, Choral Response, Random Poll, KleenSlates, and Think-Pair-Share. During each of these interactions, 100 percent of the students were expected to be actively engaged in processing their learning. By pausing frequently to allow students to engage in thinking and talking protocols, she gave her students the chance to learn at their own rate and get the support they needed as they considered her thoughtful questions.

When Mrs. Perkins introduced Clock Partners in her class, she allowed students to choose all four of their appointments, with plans to change them up every month or so. This helped ensure that learners had an opportunity to collaborate with a variety of others throughout the year. At the start of the lesson, Mrs. Perkins introduced the learning target and success criteria, and students partnered up with their 3 o'clock partner to reflect on the learning goals around the learning QAR.

Mrs. Perkins found that students quickly decided on a spot in the room to host a standing conversation with their 3 o'clock partners. They discussed the learning target and predicted what they would do to achieve the success criteria. As students talked, Mrs. Perkins positioned herself close to students she was specifically interested in hearing how they were thinking about the goal. After she heard several teams interpreting the purpose of the lesson accurately, she chose not to share the purpose with the whole group. There was no reason to repeat multiple conversations and expend valuable instructional time. She affirmed they were ready to get down to learning, sent them back to their seats, and moved on to the next phase of the lesson.

Because she needed to establish basic knowledge, Mrs. Perkins provided a visual and offered a brief instruction approach to four concepts from the lesson. One by one, as she shared each definition, she embedded opportunities for students to use Choral Response, offering repetition that reinforced the new vocabulary. Mrs. Perkins knew that once her students had the definitions down, they would be ready to apply their knowledge.

When Mrs. Perkins had enough evidence to show her that most students understood the four concepts, she sent them off with a different Clock Partner to define the concepts in their own words.

Once again, I watched her seek out specific students and listen to their definitions. It was obvious that she had chosen those students intentionally.

This process was more efficient and more effective than calling on a single hand in the air. If she had wanted to hear from a specific student and used the raise-your-hand routine, she would have had to single that student out in front of the entire class with the traditional method. Instead, her approach provided every student an opportunity to talk, and allowed her to check in on the students she wanted to monitor.

In the next part of the lesson, students had to apply their definitions. Mrs. Perkins provided a question related to the text and students had to identify what type of question it was. She first tried Choral Response with the whole group again, but now that students were moving to a higher-level skill of analyzing a question and applying a new definition, there was a bit more struggle. Choral Responses showed that not all the students were able to identify the question type. Because the response was quick and simultaneous, Mrs. Perkins could not identify who knew and who did not. So she switched to another action that still assumed all hands were up and would provide her with a better picture of who was struggling. She used a Standing Poll.

Students were assigned to small groups and given a piece of text with sample questions. Within their groups, they had to determine what type of questions they had. When they were finished in their small groups, she asked them to compare their conclusions with others. They used handheld whiteboards called KleenSlates to write their responses, and though they worked in groups, each student was still accountable for writing on a KleenSlate. On the count of three, they revealed their answers to one another, rather

than just to her. They could then compare their responses to those of other groups and ask questions to find out why some groups had different ideas. This was a common procedure in her class, and all the students knew to begin inquiring about other groups' thinking.

The lesson provided all students with multiple opportunities to respond, held everyone accountable, and gave Mrs. Perkins an indication that students were successful. She knew the students had support from peers in their small groups. So, in order to measure individual learning, the lesson closed with a four-question, low-stakes quiz to be sure they met the learning target, tying it back to the success criteria.

Hand raising has been a tradition for a long time in schools. Early in their academic careers, students are taught that if they want to speak, they should raise their hands and wait their turns. But it is an ineffective design for achieving success for all students. When our approach to teaching and learning embraces all phases of the learning process, we must move beyond the ping-pong approach of Q&A and actually check for understanding. Instead of accepting a few responses as representative of the entire class, replace the one-question-one-student approach to engagement with opportunities for all students to process a lesson. Hold *everyone* accountable for actively learning.

Using strategies that engage everyone in your questions will help you reveal a truer picture of whether students are learning and what you need to do if they are not. If we are going to make assumptions about students' eagerness to learn, why not assume

that they all have their hands raised, and are pumped, primed, and waiting for the opportunity?

The argument against calling on one hand at a time is that we are inviting students to disengage by doing nothing. Don't raise your hand and you won't be called on. Don't raise your hand and you won't have to take a risk. Don't raise your hand and it is acceptable to not think or learn.

No teacher plans to send these messages. But we do every day when we say, "Raise your hand if you can tell me …"