SECTION 2

Nonverbal Engagement Strategies

Nonverbal engagement strategies involve prompts that lead to students providing a response through the use of manipulatives, a written product, or an action. The nonverbal response may be as simple as a signaling gesture or a written response from single words to longer descriptions. There are four key ways in which nonverbal engagement strategies can be used:

1. Stop and jot
2. Guided notes
3. Response cards
4. Hand signals

Stop and Jot

STEP INTO THE
FACE-TO-FACE CLASSROOM

Mr. Albini has become more and more frustrated with the effectiveness of his instruction. In general he feels that he does a good job of interspersing videos and discussions into his lessons to break up lectures, but those strategies are not getting everyone actively involved. Specifically, he was looking for a new strategy to break up long readings.

STEP INTO THE
VIRTUAL CLASSROOM

Mr. Weston teaches his online mathematics class asynchronously, where students view him solving problems and then are asked to practice solving problems. He believes that he does a good job of teaching procedural knowledge (e.g., how to solve a problem), but students do not seem to know how to apply what they have just learned. Additionally, students report that they get bored when they are asked to practice solving a set of problems. Mr. Weston is looking for ways to actively engage students in how to apply what they have learned to real-world contexts while breaking up practice exercises.
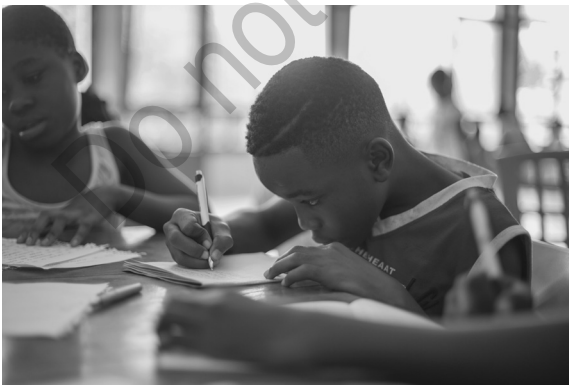

Image source: unsplash.com/santivedri

Stop and jot, also known as the pause procedure or think and write, is a strategy that allows the teacher to break up lectures by having students respond in writing to teacher prompts. These prompts can include having students summarize content that was just presented, answer comprehension questions, apply information to a real-world context, or share their thoughts and opinions on a topic.

BIG IDEA

Students write a brief response to a teacher prompt. This brief pause in the lesson allows students to think about what they have learned while giving the teacher an opportunity to assess student understanding. Although this strategy can be useful across all grade levels and content areas, it is especially effective for higher grades, where the amount of teacher talk increases.

✓ Step-by-Step Directions for Use

Stop and jot requires minimal teacher preparation. Although this strategy can be used in both a planned and an unplanned manner, preplanning the questions/prompts to be given to students is suggested. Questions/prompts can be delivered before, during, and after the lesson. Students will only need a writing instrument (e.g., pencil, pen, dry-erase marker) and a writing surface (e.g., paper, response slate, stop-and-jot graphic organizer).

1. Inform students at the beginning of the lesson that there will be times during the lesson when they will need to jot down responses to questions.

   - Model the strategy with students by answering a prompt/question using the writing procedure of your choice.

   - Explain to students that the answer does not need to be long (e.g., one to two sentences) and not to worry about spelling or grammar.

2. Stop at a predetermined time in the lesson, and present students with a prompt/question.

   - Questions at the beginning of the lesson could be used to activate prior knowledge or to assess prerequisite skills.

   - Questions/prompts during the lesson could be used to assess student understanding of the material and clarify misconceptions.

   - Questions/prompts after the lesson could be used to review critical aspects of the content learned, make connections to content previously learned, and provide relevance to the content learned.

3. After presenting a question/prompt, tell students how much time they will have to write responses.

   - Although the length of wait time will depend on the question prompt/given and the age of the student, three to four minutes is suggested.

   - Provide clear and consistent cues for how much time is available. This can include using a visual timer or verbally stating increments of time (e.g., "You have one more minute to finish your thought").

(*Continued*)

(Continued)

4. Monitor students as they write their responses, and provide assistance when needed.

5. Have students share their responses to the question/prompt by asking for volunteers, selecting specific students to model correct responses, or randomly selecting students.

6. Provide specific feedback related to both the content of their responses and participation in the stop-and-jot procedure.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- Consider providing fewer, simpler stop-and-jot opportunities for younger students that may include drawing pictures or symbols instead of writing.

- Consider having students write their responses on post-it notes and then place it on chart paper labeled "Parking Lot."

- Consider combining with the turn-and-talk strategy (see Section 3), where students will share their written responses with a partner before sharing with the class.

- Consider combining with the guided notes strategy (see next strategy), where students will fill in the blanks with key concepts, facts, or definitions.

- To save paper, consider having students jot their responses on response slates (see Section 3, pp. 68–71).

- Provide assistance to students who have difficulties with processing information. This could involve giving them sentence starters or providing them with questions/prompts in advance.

- Provide assistance to students who have difficulties with writing. This could include the use of voice-to-speech software or providing a scribe.

STEP INTO THE
FACE-TO-FACE CLASSROOM

Mr. Albini decided to use the stop-and-jot strategy to break up long readings during a book study on *Fahrenheit 451* by Ray Bradbury. For the first lesson Mr. Albini targeted the first seven pages of the book because it contains a lot of figurative language that may be difficult for his students to understand. He then created three short comprehension questions that the students could answer after every few pages.

During the reading Mr. Albini stopped after the second page and said,

> Now we are going to do a stop and jot. I am going to ask you a question, and I want you to jot down an answer. It does not have to be that long, only a sentence or two. And you don't need to worry about correct spelling or grammar. I just want you to get your thoughts down on paper. How does Montag describe the books on pages one and two, and what does this suggest? Take two to three minutes to jot down your response.

As the students were writing down their responses, Mr. Albini circulated the room to help those needing assistance. After three minutes, he randomly called on students to read their responses and asked follow-up questions to other students. He then continued the same process by reading a few pages, asking a question, having students stop and jot a response, and then calling on students to share what they had written. Although some students needed more prompting than others to write a response, he was encouraged that all students were actively participating in the lesson.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider interspersing brief, simpler stop-and-jot responses (i.e., 30 seconds) with longer stop-and-jot responses (three to four minutes).

- Consider using the strategy for both synchronous and asynchronous instruction.

- Provide assistance to students who have difficulties with processing information. This could involve giving them sentence starters.

- Provide accommodations to students who have difficulties with typing or processing information.

This could include modifying the activity so that students can record their responses orally (i.e., stop and say).
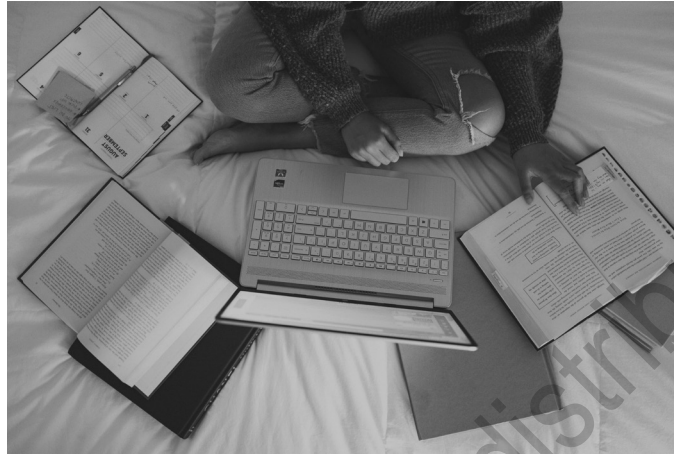

Image source: https://unsplash.com/@windows

STEP INTO THE VIRTUAL CLASSROOM

For an upcoming lesson on perimeter and area Mr. Weston knew he wanted to continue giving students a video to model how to solve the problems. However, he decided to change the way he would have them do the practice part of the lesson. When creating the practice problem activities, he interspersed the practice problems with questions that would assess how students could apply perimeter and area to real-world contexts. The questions included the following:

- When would finding a perimeter be useful in everyday life?
- When would finding the area be useful in everyday life?
- Why is it important to know the difference between area and perimeter?

When reviewing the practice problems, Mr. Weston was pleasantly surprised at the answers he received. He was able to quickly assess not only if the students knew how to solve the problems but also if they knew how to apply them in the real world. For example, most students could give an example of when finding the area would be useful but struggled to give an example of when finding the perimeter would be useful. One student even replied, "I don't know when this would be useful." This information allowed Mr. Weston to plan a supplemental lesson on when it is appropriate to find the perimeter of an area.

ADVANTAGES/DISADVANTAGES

The greatest advantage of stop and jot is the opportunity to break up long lectures in order to decrease extended periods of teacher talk. Additionally, asking students to purposefully think about what they are learning promotes effective comprehension strategies as well as providing the teacher a method to formatively assess student learning throughout the lesson. All of this can be done with a minimal amount of planning, preparation, and resources. The one disadvantage of this strategy would be if the majority of your students require extended periods of time to process information or have difficulties with writing information in a timely manner. In these instances other strategies mentioned in this book may be more effective.

Guided Notes

Image source: unsplash.com/dc

Guided notes are teacher-prepared handouts that have blank spaces for students to write in key facts or concepts. They provide students with a structured and purposeful way to attend to important concepts during instruction or independent reading assignments.

BIG IDEA

As a fact or concept is being introduced during instruction or an independent reading assignment, students fill in the missing

information on the guided notes handout. This requires students to be actively engaged throughout the lesson while providing them an effective and efficient way to take notes on important information only. The completed notes can then be used as a study guide. Although this strategy can be useful across all grade levels and content areas, it is especially effective for higher grades, where the number of lectures and independent reading assignments increase.

Step-by-Step Directions for Use

There will be a moderate amount of teacher preparation for this strategy; therefore, we will discuss the preplanning process in the procedures below. Students will need the guided notes handout. The handout can be in either paper or digital format. Students will need a writing instrument (e.g., pencil, pen) if using the paper format and an electronic device (e.g., laptop) if using a digital format.

Preplanning

1. Review the upcoming lesson, and determine the most important information.
2. Using a word processor, create a document that contains the important information, and highlight keywords or phrases.
   • This can become your master document, which can be used as an answer key or to provide differentiation.
   • Format of guided notes can vary and include complete sentences, bulleted lists, and/or outlines.
3. Replace the highlighted keywords or phrases with underlined blanks.

Instruction

1. At the beginning of the lesson, distribute guided notes to students, and inform them that there will be times during the lesson when they will need to fill in one of the blanks.
2. Stop at predetermined times in the lesson, and prompt students to fill in their guided notes.
   • Initially, prompt students for every opportunity to fill in information.
   • As students become familiar with the process, gradually reduce the number of prompts they will receive.
3. Monitor students as they write their responses, and provide assistance when needed.
4. Have students share their responses with the class at the end of instruction to ensure completion and accuracy of the guided notes.
5. Provide specific feedback related to both the content of their responses and their participation in the guided notes process.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- When creating the guided notes, consider keeping the responses brief. Longer responses will increase the downtime for most students while waiting for others to complete.

- When creating the guided notes, make sure that response items are distributed throughout the lesson.

- Consider displaying guided notes on a screen or interactive whiteboard, and complete the guided notes along with the students.

- Consider differentiating the guided notes. Students who have difficulties with processing information or difficulties with handwriting may have notes that require limited writing, while others may have notes that require more writing.

STEP INTO THE FACE-TO-FACE CLASSROOM

Ms. Casey decided to incorporate guided notes into an upcoming lesson on punctuation. To prepare, she first created a lesson outline using digital presentation software that she would display on the classroom's interactive whiteboard. Next, she created a student handout template from the lesson outline. Finally, she created two separate guided notes handouts: one for students who struggle with writing and/or have difficulties processing information (see Figure 1 for guided notes example) and one for students who can write and/or process information fluently. Students who struggle would receive guided notes with relatively little writing and examples given, while other students would receive guided notes that would require more writing and would be asked to create their own examples.

At the beginning of the lesson, Ms. Casey handed out the differentiated guided notes and explained to students,

> I am handing out a page of notes that will help you with learning punctuation. You may notice that you have some blanks on your page. You are going to be filling in these blanks as we learn about periods, question marks, and exclamation marks. You don't have to worry about when to fill in the blanks. I will tell you as we get to it.

Ms. Casey continued her lesson on punctuation and stopped at pre-determined times so that the students could complete parts of their guided notes. For additional support she had the outline displayed on the board so that students could copy the information if needed. She was pleased to see that more students were engaged in the lesson and there were fewer occasions when she needed to redirect students for being off task. Additionally, she had the students put the guided notes in their folder so that they could use them as a reference in future practice activities and homework.

FIGURE 1 ● Guided notes example

GUIDED NOTES: Punctuation

PERIOD

    A.   _____: used to mark the end of a statement.

        a. *Example:* Tom was playing basketball.
        b. *Example:* Jill sits in the chair_

    A. Abbreviations

        a. Mister: _____
        b. Doctor: _____
        c. Street: _____
        d. Road: _____
        e. Avenue: _____
        f. Feet: _____

QUESTION MARK

    A.   _____: used to mark the end of a question.

        a. *Example:* Where is the dog?
        b. *Example:* Who is that man_

EXCLAMATION MARK

    A.   _____: used to mark the end of a strong feeling.

        a. *Example:* I had the best time!
        b. *Example:* That was a great shot_

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- When creating the guided notes, consider keeping the responses brief. Longer responses may lead to students missing key information because they are writing.

- Consider the format you will allow your students to use: handwritten or digital.

  o If asking students to hand write the notes, consider how they will be able to obtain the document.

  o If asking students to type notes on a word processor, consider possible formatting issues that may occur.

- If teaching synchronously, consider displaying guided notes on your computer screen, and complete the guided notes along with the students.

Image source: https://unsplash.com/@surface

STEP INTO THE VIRTUAL CLASSROOM

Mr. Siva thought that creating guided notes for his video lectures might help his students remember the key information needed for the exam. When planning for an upcoming video lecture on analyzing ecosystems, Mr. Siva thought of the key elements that he wanted his students to know from the lesson: abiotic and biotic components, producers, consumers, and decomposers. Next, he created guided notes that students could download and complete using their computer. Because the guided notes were to be completed digitally, he decided to put them in a table format so that students could easily type in information.

Mr. Siva then created his presentation using digital presentation software. This allowed him to incorporate presentation slides that would prompt students to fill in their guided notes. For example, one slide was titled "Guided Notes: What Is an Abiotic Component? What Are Some Examples of Abiotic Components?" Bullet points on the slide included information that students would need to add to the table.

- An abiotic factor is a nonliving part of an ecosystem that shapes its environment.

- Examples include the following:

  ⊕ Wind, sunlight, soil, water, atmosphere, and temperature

When recording the video, Mr. Siva told the students that they would need to complete the guided notes using the information on the slides and then submit the completed notes as an assignment.

After recording the video, Mr. Siva was confident that the students would be more engaged with the video. Not only would the guided notes require them to be actively engaged while watching the video, but also they would have a resource to use when studying for the exam.

ADVANTAGES/DISADVANTAGES

The greatest advantage of guided notes is that it promotes active engagement while providing an effective and efficient way to take notes on important information. Additionally, it is very easy to differentiate, so all students can be successful. Although this strategy is effective, it does require a moderate amount of time to create the guided notes handout. Furthermore, it may be difficult to implement if the majority of your students require extended periods of time to process information or have severe difficulties with writing information in a timely manner.

Response Cards

Response cards are simply small cards held by students that allow them to respond in a number of ways. There are several ways to use response cards to engage students during instruction.

- Colored choice
- Multiple choice
- True/false
- Response slates and whiteboards
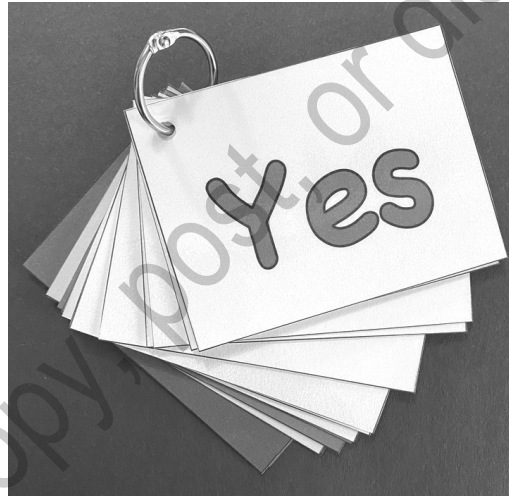
RESPONSE CARDS: COLORED CHOICE

STEP INTO THE FACE-TO-FACE CLASSROOM

A ninth-grade social studies teacher, Mr. Buck, was preparing for a unit on basic economics. When he had previously taught this unit, he had noticed that students struggled with the vocabulary associated with economics, which greatly affected their understanding. He knew that he would need to preteach these vocabulary terms; therefore, his first lesson would be defining economic terms such as *scarcity*, *production*, *market*, and *cost*.

There are several ways to use response cards to engage students during instruction. Perhaps the simplest of these is the colored choice cards, which involves students having two or more colored cards representing various choices. The cards can be used to quickly survey student opinions or can be more closely tied to content questions.

BIG IDEA

Students respond to teacher queries by raising a colored card to indicate a choice or preference. For example, the teacher may ask students to raise their red cards if they wish to take a break now or a blue card if they wish to take a break in 10 minutes. Similarly, the teacher can ask students about the answer to a question with multiple choices by having each choice associated with a particular color of card.

Step-by-Step Directions for Use

The colored choice cards require very little setup and can be used in both a planned and an unplanned manner.

1. Deliver cards to students, and teach them how they are to be used.
   - Show students how to hold a choice card up to be seen.
   - Tell students that the color associated with choices will be designated for each opportunity, so they need to listen.

(*Continued*)

(Continued)

- Make students aware that guessing is okay—this is not a test.
- Practice with students a few times so that they understand the simple procedure.

2. Plan to use the cards at specific points during instruction.

- Determine what the choices will be.
- Make sure that the possible choices do not outnumber the available card colors.
- Use the cards to break up longer periods of teacher talk and surrounding new or complex content.
- Remember that the purpose is to engage students and not to stump them.

3. Provide reminders to students about colored choice cards immediately preceding their use: "We're getting ready to do a colored card choice, so have your cards ready."

4. After presenting a choice, wait for all the students to respond before moving on.

- If a student does not respond, provide one reminder/prompt.
- If a student does not respond after a prompt, continue with those who have responded, and speak privately to the student afterward.

5. Use students' attention as an opportunity to provide specific feedback related to both the content of their responses and their participation in the choice card process.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- Consider asking students to discuss choices with a partner or in groups before responding.
- Teach students with cognitive challenges or content area deficits to look to other students for clues before responding (this prevents fear of failure while still promoting engagement).
- Present choice opportunities while walking around the room rather than always from the front—gain proximity to students who are most likely to struggle with attention to such tasks.
- Consider ways to use this strategy in an unplanned and impromptu manner to get students' attention when not directly involved in content (indicate preference, understanding, etc.).

STEP INTO THE
FACE-TO-FACE CLASSROOM

To preteach the economic vocabulary, Mr. Buck decided to give the students statements related to the definitions and have them use colored choice cards to decide whether a statement is an example of the definition or a nonexample of the definition.

The first step in planning was to look at the definitions of each term and identify their critical attributes to make them more student friendly. For example, the student-friendly definition of scarcity is a situation where something is not easy to find or get. Mr. Buck went through the rest of the terms (i.e., goods, market, cost) and determined each term's critical attributes to create student-friendly definitions and then created examples and nonexamples for each. Finally, he purchased colored sticky notes: one yellow pad and one green pad.

To begin the lesson, Mr. Buck introduced the student-friendly definitions that he had displayed on a digital presentation slide. He then began to give each student a green and a yellow sticky note and explained,

> To help us better understand these terms, I am going to give you a statement and ask you if it is an example of this term or a nonexample of this term. If it is an example, you will hold up your yellow sticky note; if a nonexample, hold up your green sticky note. Because I want to give you a little time to think, don't raise your sticky note until I tell you.

Mr. Buck started with the term *scarcity*. He stated to the class,

> Okay, we know that scarcity is a situation where something is not easy to find or get. Now let us look at this statement. Each year a limited amount of the flu vaccine is available to the population, meaning that there is not enough for each individual to be vaccinated. Is this an example or a nonexample of scarcity? Think about it.

After five seconds, he prompted the students to raise their sticky notes. He then replied,

> Those that have their yellow sticky notes up are correct. This is an example of scarcity because there was not a sufficient amount of the resource to go around. Now, let us try another. I planted peppers in my garden, and I now have more than I can possibly eat. Think about it.

After five seconds, he prompted the students to raise their sticky notes. He then chose a student who had the correct answer and

(*Continued*)

(Continued)

asked, "Peter, why do you think this is a nonexample? Yes, you are correct. This is a nonexample of scarcity because there was more than a sufficient amount of the resource to go around." Mr. Buck continued this process for the terms *goods*, *market*, and *cost*.

Mr. Buck then checked the students' understanding of the terms by actively involving them in generating their own examples and nonexamples for each term. He did this by, first, having them work in pairs to generate multiple examples and nonexamples of the terms. Then, they introduced these examples and nonexamples to the class and had their classmates use their green and yellow sticky notes to determine whether it was an example or a nonexample of the term. By the end of the lesson, Mr. Buck was confident that the students had an initial understanding of the terms for the unit. Because this activity was so easy and efficient to implement, he decided to use it throughout the unit to serve as a brief review of the terms.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider using colored choice cards only in a synchronous environment to assess student learning in a quick, efficient manner. This strategy is not compatible with asynchronous learning.

- Because students will need to have the cards outside of the classroom, consider creating a set of laminated cards on a ring that can be delivered to the students' homes.

  - If this is not possible, teach students to make their own response cards and to keep them ready for use during each lesson.

  - To make sure that all students have cards for the lesson, ask students to have them with them for every lesson, or inform them that they will be needed in advance (e.g., included as materials needed for the weekly agenda).

- For younger students and/or virtual platforms without the hand-raising feature, consider having students use the cards when wanting to participate (e.g., display green if you have something to share).

- Consider using response cards to help with procedural routines such as raising a hand.

- Consider providing fact sheets or other cues for students with cognitive deficits or other students who have difficulty with quick recall.

STEP INTO THE VIRTUAL CLASSROOM

Mr. Bachmann decided to use colored choice cards, with a green card representing a subject and the red card representing a verb. To prepare for the lesson, Mr. Bachmann selected words that represented the definitions the class had learned for both subject and verb, and wrote them on index cards. He also added in the weekly agenda that the students were to have their colored response cards he had previously given them on the day of the lesson.

To begin the lesson, Mr. Bachmann reviewed with the class the definitions they had previously learned for *subject* and *verb*. He pointed to the definitions typed on the computer screen and said,

> Today we are going to continue learning about subjects and verbs. We have learned that a subject is a person, place, thing, quality, or idea. On the other hand, a verb is a doing word that describes a body action or a mind action.

Mr. Bachmann prompted the students to get out their colored choice cards and said,

> To help us practice, I am going to give you a word that is either a subject or a verb. When I snap my fingers, I want you to show me the green side of the card if you think it is a subject and the red side of the card if you think it is a verb. Ready? The first word is *book*. Think about it.

Mr. Bachmann waited approximately five seconds and snapped his fingers to prompt the students to raise their cards. He quickly noticed that all the students were showing him their green cards. "Yes, it is a thing, which makes it a subject. Good job! Now put your cards down on your desk. The next word is *jump*. Remember, don't raise your card until I snap." After five seconds, he snapped his fingers and noticed that all the students raised their red cards. "Yes, it is a body action, which makes it a verb. Great job!"

As the activity continued and the words became more challenging for the students, Mr. Bachmann modified his routine. For example,

(*Continued*)

(Continued)

when he noticed that not all students had the correct answer for the word wish, he asked a student showing a red card why he thought it was a verb. When the student responded that it shows action, Mr. Bachmann replied,

> Yes, it is a doing word. Doing words are either a body action or a mind action. In this case it is a mind action. If you are unsure, ask yourself if you can do the word. If so, it is a verb. For example, can I wish? Yes! Then, it is a verb. On the other hand, can I happiness? No! Then, it is a subject.

Mr. Bachmann continued the same process of giving the students a word, allowing think time, prompting their response, and then asking an individual student to justify their thinking.

Overall, Mr. Bachmann was pleased with the colored choice card activity. He was able to increase student engagement while also assessing student understanding on subject and verb. Based on the success of this lesson, he reused the green/red cards when asking students true/false or yes/no questions.

ADVANTAGES/DISADVANTAGES

Of course, the big advantage of the colored choice response cards is that they are simple to use in both a planned and an unplanned manner. Students can keep the cards with them at all times, allowing the teacher to call for a response at any time it may be necessary to refocus the group. They are also easy to assess as the teacher needs only to glance for colors rather than read letters, numbers, or other more specific responses. The only disadvantage is that the choices are limited by the number of colored cards each student has available. Because having more than four different colors gets to be more challenging for the teacher, colored choice cards are probably best used for more binary choices (yes/no, choice 1/choice 2). Additionally, it may be challenging to make sure that all students have their cards in the virtual environment.
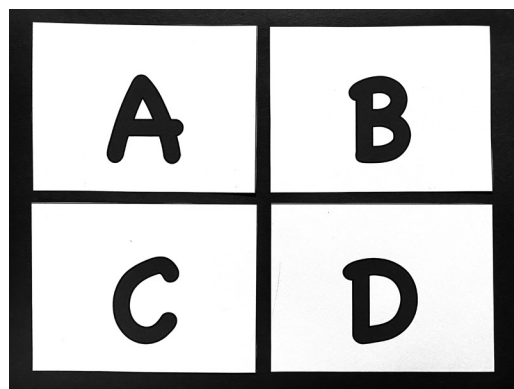
RESPONSE CARDS: MULTIPLE CHOICE

STEP INTO THE
FACE-TO-FACE CLASSROOM

Ms. Newton teaches an elementary classroom in a very rural setting. Her class is currently working on a science unit covering the solar system. The unit requires students to remember key facts and understand complex and abstract concepts. Ms. Newton is worried that her students do not have complete understanding of these facts and concepts. She feels that they need more repetition of the content. But the students have become restless, and she has begun to find it difficult to engage them throughout the lesson. She thinks that any form of repetition may be too boring and increase student off-task behavior.

STEP INTO THE
VIRTUAL CLASSROOM

Mr. Hand is teaching a world geography class online to a virtual classroom of high school students. He would really like to have his students answer chorally, but because of the online platform his district uses, he cannot hear all of the students at one time. He feels that he needs to have some way of keeping the students engaged while also assessing the degree to which the class as a whole is understanding the content he is teaching. He has thought about asking more questions of individual students, but he has found that it is too easy for students to simply answer with an "I don't know." This response tends to halt the lesson and provides no real information as he believes students answer in this manner simply to avoid being engaged.

Students can be provided with multiple cards, each with a different choice for answering. These can be A, B, C, D; 1, 2, 3, 4; or even red, yellow, green, and blue. The idea is that when the teacher provides a prompt to respond, that prompt would ask students to decide among a range of possible responses and to hold up the card that represents their choice of the correct response.

BIG IDEA

Students respond to teacher queries by raising one of a number of cards that indicate different choices. For example, the teacher may point to a state on the map and ask students to respond with their multiple-choice cards whether the state's name is A = Arizona, B = Alaska, C = Alabama, or D = Arkansas. Each student then selects the card representing his or her choice and raises it for the teacher to view.

Step-by-Step Directions for Use

The colored choice cards require very little setup and can be used in both a planned and an unplanned manner.

1. Deliver cards to students, and teach them how they are to be used.
   - Show students how to hold a multiple-choice card up to be seen.
   - Tell students that the letter, number, or color associated with the choices will be designated for each opportunity, so they need to listen.
   - Make students aware that guessing is okay—this is not a test.
   - Practice with students a few times so that they understand the simple procedure.
2. Plan to use the cards at specific points during instruction.
   - Determine what the choices will be.
   - Make sure that the possible choices have one clear correct answer. Remember, this is for engagement and not to be used as a challenge.
   - Use this strategy to break up longer periods of teacher talk and surrounding new or complex content.
   - Remember that the purpose is to engage students and not to stump them.

3. Provide reminders to students about multiple-choice cards immediately preceding their use: "We are getting ready to do a multiple-choice card activity, so have your cards ready."

4. After presenting the choices, wait for all students to respond before moving on.
   - If a student does not respond, provide one reminder/prompt.
   - If a student does not respond after a prompt, continue with those who have responded, and speak privately to the student afterward.

5. Use students' attention to the card activity as an opportunity to provide specific feedback related to both the content of their responses and their participation in the choice card process.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- Consider asking students to discuss choices with a partner or in groups before responding.

- Teach students a strategy for having a process of elimination to select the most likely answer.

- Teach students with cognitive challenges or content area deficits to look to other students for clues before responding (this prevents fear of failure while still promoting engagement).
  - For younger students or those with language challenges consider using colors, animals, or other choices rather than letters or numbers.

- Present choice opportunities while walking around the room rather than always from the front—gain proximity to students who are most likely to struggle with attention to such tasks.

- Consider ways to use the strategy in an unplanned and impromptu manner to get students' attention when not directly involved in the content (indicate preference, understanding, etc.).

STEP INTO THE
FACE-TO-FACE CLASSROOM

Ms. Newton completes an explanation of how the planets' distance from the sun affects both their orbit time and their temperature. While the lesson was not particularly difficult and the students had opportunities to engage as a group, Ms. Newton decides to provide some opportunities to build in some repetition of the new content to be sure that the students are fluent with the information. All students have a set of small laminated response cards on their desk, each containing cards labeled A, B, C, and D. The routine for using the cards is familiar to the students as it was taught at the start of the year and used often. Ms. Newton provides a direction to the class: "Let us do some multiple-choice response cards to get us thinking more about what we have just learned. Have your cards ready, and I will give you the options." During planning, Ms. Newton had written out five different questions covering the new content, each with four multiple-choice answer options. She prompted the students to be ready: "Okay, here is the first question; show me that you have your response cards in your hand." She then projected the first question on the screen and read it aloud: "Which planet is closest to the sun? Is it A. Mercury, B. Venus, C. Earth, or D. Mars?" She continued with reminders to facilitate student responding: "Think about what we talked about today, and hold up the card you think is the best answer." Once all the students had a card held up, she provided feedback;

> Wow, I see a lot of A. Mercury, and that is the right answer. Remember, we talked about how it was very hot because it was so close to the sun? Some people may have said Mars because it is called the Red Planet, but it is actually the farthest away of those four choices.

She then moved on to the next question using the same routine. In the end, Ms. Newton reviewed the content and gave the students directions for doing some group work building models of the solar system.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider using multiple-choice cards only in a synchronous environment, to assess student learning in a quick, efficient manner. This strategy is not compatible with asynchronous learning.

- Because students will need to have the cards outside of the classroom, consider creating a set of

laminated cards on a ring that can be delivered to the students' homes (see page 50).

- o If this is not possible, teach students to make their own response cards and keep them ready for use during each lesson.

- o To make sure that all students have cards for the lesson, ask students to have them with them for every lesson, or inform them that they will be needed in advance (e.g., included as materials needed for the weekly agenda).

- Consider providing fact sheets or other cues for students with cognitive deficits or students who have difficulty with quick recall.

- Teach students a strategy for having a process of elimination to select the most likely answer.

- Consider ways to use the strategy in an unplanned and impromptu manner to get students' attention when not directly involved in the content (indicate preference, understanding, etc.).

STEP INTO THE VIRTUAL CLASSROOM

Mr. Hand provided a brief overview of some new content he had just presented on the world rivers. He then reminded the students that rivers were a major part of what would be studied during the current unit and asked whether there were any questions. He looked at his computer screen for a virtual hand raise but saw none. "Okay, looks like you all are feeling comfortable with this new information on world rivers, so let's do a little practice." Because using multiple-choice cards was a new routine for the classroom, he introduced it to the students and asked them to create their own cards.

I asked you all to have a piece of paper and fold it to create four squares. Now I want you to write the letter "A" in the first square—big enough to fill the square. Now do a B, C, and D in the other three squares—and remember to make them big enough to fill the square.

After giving a minute for the students to finish this process, he showed them how to hold the paper in different ways to show a single

(*Continued*)

(Continued)

letter. "Now, I have some questions about rivers that I am going to put up, and you can use your letter card to show me what you think are the correct answers." Mr. Hand then shared his screen to show the first question and read it aloud:

> We know the Amazon is the longest river in the world at more than 4,200 miles. What is the second longest? Is it A. the Mississippi, B. the Yangtze in China, C. the Nile in Egypt, or D. none of these? Hold up your card to indicate your answer—remember to hold it up so your camera can see it.

Once all the students had raised their cards, he provided feedback: "I see lots of different answers, but most of you are holding up a C—the Nile River—and that is correct." He then went on to provide further information while he had student attention on the topic, delivered in the form of a rhetorical question: "Are there any American rivers in the top 10? No, the Missouri River is the longest one in America, but it is not even in the top 10 for the world." Mr. Hand then shared the next question on his screen and repeated the procedure.

ADVANTAGES/DISADVANTAGES

As with other response cards, one big advantage of multiple choice response cards is that they are simple to use in both a planned and an unplanned manner. Students can keep the cards at their desks at all times, allowing the teacher to call for a response at any time it may be necessary to refocus the group. They are also easy to assess as the teacher needs only to glance for colors rather than read letters, numbers, or other, more specific responses. The slight disadvantage is that providing multiple choices and linking them to corresponding cards is more difficult to do in an impromptu manner. While it is not impossible to come up with a multiple-choice question off the cuff, the multiple-choice response cards are probably going to be more useful when preplanned.

RESPONSE CARDS: TRUE/FALSE

STEP INTO THE FACE-TO-FACE CLASSROOM

Mr. Cross is teaching psychology during the first period each day to a classroom of high school juniors and seniors. The students come into the classroom and get settled quickly, but their attention tends to fade if not continually engaged. Mr. Cross knows that the students tend to behave better when they are highly engaged in discussions, but he also needs to keep student attention to provide new content and to review important facts. He is concerned that if he uses too much class time with discussion, he will lose precious instructional time and will not able to cover all the material to the depth needed for students to pass the final exam.

STEP INTO THE VIRTUAL CLASSROOM

Ms. Sandwich has been teaching an online health class to a group of third-grade students. She finds that children of this age have a difficult time staying engaged with the lesson content, possibly because they are used to watching cartoons or playing video games when looking at a computer screen. She says it is hard to compete with that level of excitement and engagement while teaching health, and she is looking for a way to provide very quick and mostly unplanned opportunities for students to respond within the curriculum throughout the lesson.

The true/false option for response cards may seem like an option that could be used with either the colored choice or the multiple-choice cards, and in many respects, it is. But having specifically dedicated true and false cards does present some advantages over these other options because of how quickly they can be used without explanation or setup.

BIG IDEA

Students respond to teacher queries by raising a card to indicate either true or false (T or F). For example, the teacher may ask students

to use their true/false cards to indicate whether they think a problem was done correctly, whether they agree with an answer, or even whether they agree with a statement made by the teacher. Because the true and false cards are self-explanatory, the teacher does not need to take the time to explain which card represents agreement and which represents disagreement.

Step-by-Step Directions for Use

The true or false cards require very little setup and can be used in both a planned and an unplanned manner.

1. Deliver cards to students, and teach them how they are to be used.
   - Show students how to hold a choice card up to be seen.
   - Call this "true or false" or some other name so that when this phrase is mentioned all the students know immediately what's coming next.
   - Briefly explain that the true card means that you agree and the false card means that you do not agree.
   - Make students aware that guessing is okay—this is not a test.
   - Practice with students a few times so that they understand the simple procedure.

2. Plan to use the cards at specific points during instruction.
   - Determine what the questions will be.
   - Make sure that the possible choices are clear and that there is a clear correct answer.
   - Use the strategy to break up longer periods of teacher talk and surrounding new or complex content.
   - Remember that the purpose is to engage students and not to stump them.

3. Provide reminders to students about the true and false cards immediately preceding their use: "Here comes a true or false question, so have your cards ready."

4. After presenting a true/false question, wait for all the students to respond before moving on.
   - If a student does not respond, provide one reminder/prompt.
   - If a student does not respond after a prompt, continue with those who have responded, and speak privately to the student afterward.

5. Use students' attention to the card activity as an opportunity to provide specific feedback related to both the content of their responses and their participation in the choice card process.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- With more challenging questions, consider asking students to discuss choices with a partner or in groups before responding.

- Teach students with cognitive challenges or content area deficits to look to other students for clues before responding (this prevents fear of failure while still promoting engagement).

- Present true/false response opportunities while walking around the room rather than always from the front—gain proximity to students who are most likely to struggle with attention to such tasks.

STEP INTO THE FACE-TO-FACE CLASSROOM

Mr. Cross has provided all the students in his classroom with a set of small laminated response cards attached by a ring. The cards include a single card with a "T" on one side and an "F" on the other. He has made it clear to all that the T and F card was to be used to indicate true or false and that students need to be ready as he may spring such a question on them at any time and require that they respond by holding up the correct side of their card. He goes through the process once as practice: "So if I suddenly yelled out 'true or false,' you would need to grab your card—and I might say, 'Freud was the father of psychoanalysis—true or false'." He then pulled out his own card and held up the T side, explaining, "You would all need to get to your cards fast and hold up your answer. I held up the T because this is a true statement." He then provided a real practice opportunity, yelling out "True or False" and waiting for student eyes, then making the statement "Carl Jung was a behaviorist" and immediately providing the reminder: "Hold up your card to indicate whether you think this is true or false. I'm seeing lots of F cards, and that's because this is false—we all know Jung was a disciple of Freud at one point." Now that the students had this routine down, Mr. Cross used it on a regular but random basis to keep the students engaged with the content. He also found over time that this routine was useful in getting a quick read on whether the students were understanding the concepts being discussed.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider using the true or false strategy only in a synchronous environment, to assess student learning in a quick, efficient manner. This strategy is not compatible with asynchronous learning.

- Because students will need to have the cards outside of the classroom, consider creating a set of laminated cards on a ring that can be delivered to the students' homes.

  o If this is not possible, teach students to make their own response cards and to keep them ready for use during each lesson.

  o To make sure that all students have cards for the lesson, ask students to have them with them for every lesson, or inform them that they will be needed in advance (e.g., included as materials needed in the weekly agenda).

- Consider providing fact sheets or other cues for students with cognitive deficits or students who have difficulty with quick recall.

  o For younger students or those with language challenges, consider using colors, animals, or other choices rather than the letters "T" and "F."

- Present true or false response opportunities throughout the lesson rather than only at the end of a section.

STEP INTO THE VIRTUAL CLASSROOM

Because she could not immediately provide laminated cards to all her online students, Ms. Sandwich had all students create their own true or false cards as part of an activity. She led them through the simple process of using a piece of paper and had them write "Yes" on one side and "No" on the other because she liked asking, "Is this true?" rather than "True or false?" She then presented it to the students as a game. "I am going to say something that may be true or not true. When I ask, 'Is this true?' I want you to raise your card." As she described the rules,

Ms. Sandwich held up her own card. "Your job is to decide if what I said is true and answer by holding up your 'Yes' or your 'No' card." She provided an initial example:

> Maybe I would say to everyone, "Is this true?" and then say, "Germs are really big, and we can see them." If you heard that, you would think, no way, germs are small, so that is not true, and you would hold up your "No" card.

At this point she asked all the students to hold up their card so that she could make sure that all had one. Then, she provided a practice opportunity. "Hey, is this true? It is important to wash your hands before you touch food. Hold up the card you think is right." Once the routine was comfortable for the students, Ms. Sandwich used it frequently and randomly to keep student attention. She liked to mix this strategy with other similar response card strategies as a method of keeping students engaged with the health content.

ADVANTAGES/DISADVANTAGES

The one big advantage of the true or false cards in comparison with the other response cards is the simplicity of the choices and the fact that it can be applied with little or no explanation. Students can keep the cards at their desks at all times, allowing the teacher to call for a response at any time. In fact, the true or false cards is one of the quickest and simplest ways of getting all students to think and then respond physically. As with the other response cards, this method is also easy to assess as the teacher needs only to glance at the card responses. The only disadvantage is that the choices are limited to binary true or false questions. Over the course of a lesson, teachers will want to use a range of engagement strategies providing more rigorous content.
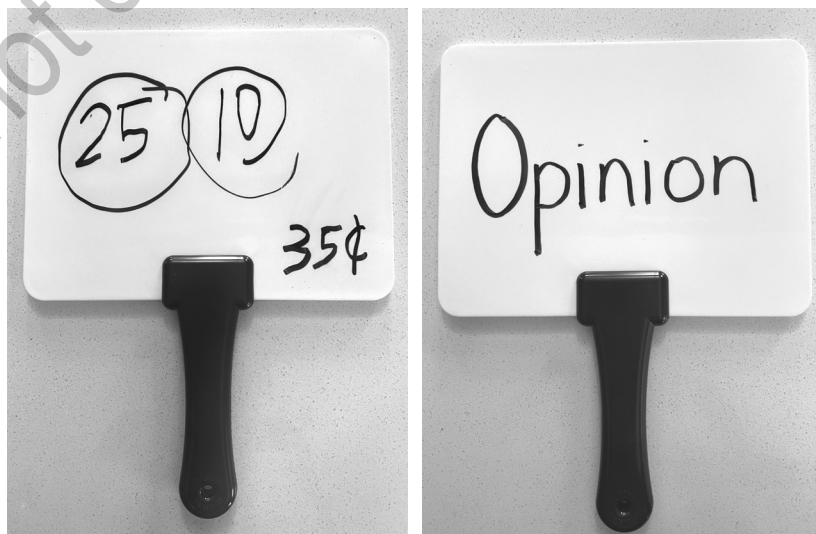
RESPONSE CARDS: RESPONSE SLATES AND WHITEBOARDS

STEP INTO THE FACE-TO-FACE CLASSROOM

Ms. Chu is a co-teacher in a high school algebra class. She wants to keep her students engaged during class and monitor their progress before homework is assigned. While she prefers asking individual questions of students, she has found that this strategy alone is too slow to allow her to engage every student during class and still cover all the necessary material. She wants to find a strategy that would allow her to engage more students while still being able to see their work on specific problems.

STEP INTO THE VIRTUAL CLASSROOM

Mr. Steele teaches language arts online to elementary students and is concerned that his students are disengaged during instruction. He typically works from a shared screen and diagrams sentences while describing how and why he diagrams. He realizes that diagramming sentences is not exciting for elementary students, but it is part of the required curriculum. Mr. Steele is looking for a way to have more interaction with the students in a manner that still allows him to get some form of information on how individual students perform

While response slates and whiteboards are not technically response cards, they do involve the same set of principles, in that students are required to consider a response and hold it up. We refer to this as a written response despite the fact that an action may be required because the student's answer to the question is written. In addition, it is also easy to create these by simply laminating a paper card so that it can be used with a dry-erase pen. The difference, of course, is that slates require the student to produce rather than select an answer. Cards and slates can be small enough to fit in the palm of a hand, tablet sized, or even in the shape of a small paddle with a small handle.

BIG IDEA

Students respond to teacher queries by writing on dry-erase cards, chalkboards, or erasable slates. Students can respond by drawing or writing, depending on the teacher's query. For example, the teacher may ask students to draw a pentagon on their slate and raise it up over their head. Similarly, the teacher can ask students to write a word that means the same as "flat" or to indicate which U.S. state has the most coastline.

✓ Step-by-Step Directions for Use

Response slates and whiteboards require slightly more setup than other response card options, but they can still be used in both a planned and an unplanned manner.

1. Deliver erasable cards or slates to students, and teach them how they are to be used.

   - Show students how to hold the card or slate up to be seen.

   - Demonstrate that the card or slate is erasable and that they will be both writing and erasing them each time they are used.

   - Model appropriate use by allowing students to provide the query to which the teacher responds.

     o Model both drawn and written responses.

   - Make students aware that guessing is okay—this is not a test.

   - Practice with students a few times so that they understand the procedure.

(*Continued*)

(Continued)

2. Plan to use the cards or slates at specific points during instruction.

   - Determine what the directions will be.

   - Make sure that the possible choices can be easily drawn or written in no more than a few words.

   - Remember that the purpose is to engage students and not to stump them.

3. Provide reminders to students about response slates or whiteboards immediately preceding their use: "We're getting ready to use our whiteboards, so have them ready."

4. After presenting a query or direction, wait for all the students to respond before moving on.

   - If a student does not respond, provide one reminder/prompt.

   - If a student does not respond after a prompt, continue with those who have responded, and speak privately to the student afterward.

5. Use students' attention as an opportunity to provide specific feedback related to both the content of their responses and participation within the process.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- Consider using response slates or whiteboards early in the lesson to get students thinking and then later in the lesson to facilitate higher-order thinking.

- Consider asking students to discuss choices with a partner or in groups and respond jointly.

- Consider using response slates or whiteboards to initiate practice, so that students get opportunities to respond quickly with feedback before moving to independent practice.

- Teach students with cognitive challenges or content area deficits to look to other students for clues before responding (this prevents fear of failure while still promoting engagement).

- Present response slate or whiteboard opportunities while walking around the room rather than always from the front—gain proximity to students who are most likely to struggle with attention to such tasks.

- Because slates have some weight to them, there is the possibility of students inadvertently hitting one another while raising them. Because of this, it is important to teach students the correct and incorrect ways to hold and raise the response slates.

> ## STEP INTO THE FACE-TO-FACE CLASSROOM
>
> Ms. Chu purchases small whiteboards, dry-erase markers, and dry-erase erasers that can be kept on each desk. She explains to the students that after she models and provides guided practice, they will complete several problems on their whiteboard and display them when she says, "Boards up!" The class works through several problems in this manner. Ms. Chu quickly scans the room and makes a note of which students need more practice. During independent practice, she spends individual time with each of these students, reteaching the concept. After class she reflects on the effectiveness of the strategy. She notes the increased engagement of the students and her ability to quickly determine who needs remediation.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider using response slates or whiteboards only in a synchronous environment, to assess student learning in a quick, efficient manner. This strategy is not compatible with asynchronous learning.

- Because students will need to have the cards outside of the classroom, consider creating a set of laminated cards on a ring that can be delivered to the students' homes.

  o If this is not possible, teach students to make their own response cards and keep them ready for use during each lesson.

  o To make sure that all students have cards for the lesson, ask the students to have them with them for every lesson, or inform them that they will be needed in advance (e.g., included as materials needed for the weekly agenda).

- Consider providing fact sheets or other cues for students with cognitive deficits or students who have difficulty with quick recall.

STEP INTO THE
VIRTUAL CLASSROOM

Mr. Steele does not have the ability to purchase or otherwise provide his online students with erasable slates, but he knows that all students have access to clear plastic sheet dividers in their notebooks and dry-erase markers as they were on a list of required materials for the students. He asks the students to put their clear plastic divider on top of white paper and to use their dry-erase markers to diagram sentences. He shows them how to set this up and how to use a dry cloth to erase once they have finished. After diagraming a sentence and clearly describing the rules for how it was diagrammed, Mr. Steele asks the students to write a brief sentence on their divider: "Jacob painted his old house." He then asks them to divide the sentence, one component at a time. "Okay, now that you have it written, I want you to circle the subject and hold it up so that your camera can see it." Once all the students have responded, he provides feedback,

> Everyone did a great job of identifying "Jacob" as the subject. Next, I want you to go back to the sentence and underline the predicate phrase. Remember, you're looking for the part of the sentence that tells us about the subject—what is going on.

The students all go back to work on their sentences for several seconds before Mr. Steele asks, "Okay, let's see what you have. Hold your sentence back up again to show what you have underlined." When he saw students making errors or struggling with a particular component, he explained in detail what the correct response should be and why the alternatives were incorrect.

> Yes, "painted his old house" is the predicate because it tells us what Jacob did. But you would not underline just "old" or just "painted" because that is not the complete statement of what happened.

Mr. Steele used this strategy for the remainder of the diagramming sentences unit and then continued to find ways to get students to write their answers in an erasable format.

ADVANTAGES/DISADVANTAGES

The obvious advantage of the erasable cards and slates is that they provide students with the opportunity to create responses as opposed to selecting from among teacher-provided options. Students can keep the cards or slates at their desks at all times, allowing the teacher to call for a response at any time it is appropriate. In terms of disadvantages, erasable cards and slates can be more difficult to assess as the responses are likely more complex. However, this can be somewhat alleviated by having students respond by group rather than individually. In addition, this strategy requires that students have an erasable writing instrument and eraser—items that are likely to be misplaced.

Hand Signals

Hand signals allow students to use their hands to respond in a number of nonverbal ways. There are several ways to use hand signals to engage students during instruction.

- Fist to five
- Fingers for numbers
- Thumbs up/thumbs down

FIST TO FIVE

STEP INTO THE FACE-TO-FACE CLASSROOM

Ms. Maddow recently learned that student self-assessment can not only lead to increased engagement but also be beneficial for life-long learning. Because of this, she was eager to incorporate this practice into her fifth-grade classroom but was worried that it may be too time-consuming.

STEP INTO THE VIRTUAL CLASSROOM

Ms. Hayes is teaching her seventh-grade health education class online for the first time this year. She is a little nervous that the students will not be as engaged with the online format as they were when she taught a face-to-face class. One thing she wants to do is encourage students to assess their own knowledge before and after a lesson. She thinks that by doing this, students would be more engaged in what they are learning.

The fist-to-five strategy allows students to demonstrate their comfort level, or general level of understanding of the information or concepts that the teacher presents. It is a self-assessment tool that lets students provide a Likert-type rating when prompted by the instructor. When using fist to five, students are able to provide six levels of comfort or understanding, with

Image source: https://unsplash.com/@k_kyere

the closed fist indicating a 0, or no understanding or comfort, and each raised finger, 1–5, indicating an increasing level of understanding, with 5 signaling the greatest level of comfort or understanding.

BIG IDEA

Students respond to teacher queries about their level of understanding or comfort on new concepts or material by raising a hand that provides a rating of 0–5, with 0 meaning no understanding, indicated by a closed fist. Each progressive level of understanding can be indicated by additional raising of fingers 1 through 5. This self-assessment by students allows the teacher to quickly scan individual students, small groups of students, and even large groups of students in order to assess the general understanding of a concept by all students. This information can then be used by the teacher to determine if a concept needs to be revisited or if additional instruction needs to be provided to individual students, small groups, or the entire class.

Step-by-Step Directions for Use

The fist-to-five strategy can be used in a variety of situations, both planned and unplanned, as long as students have been provided instruction on how the system works, so that they are comfortable in providing a rating when prompted.

(*Continued*)

(Continued)

1. Teach students how the fist-to-five system works and how you will be using it in your classroom.

   • Explain that they will be rating themselves on their understanding or comfort level on ideas, information, or concepts that you will be discussing in class.

   • A "fist," or level 0, means that you have no understanding or comfort around the information or concept.

   • A "1," or holding one finger in the air, indicates that you understand just a little of what the teacher presented but you are not very comfortable with the information or concept.

   • A "2," or holding two fingers up, indicates that you understand some of what was presented but you still have some information around which you have limited understanding or comfort.

   • A "3," or holding three fingers in the air, indicates that you have a basic understanding of most of what was presented but you did not understand everything, and you still have some room to grow in your understanding or comfort.

   • A "4," or holding four fingers in the air, indicates that you feel pretty comfortable with the concept or information that was presented. Perhaps you did not grasp everything and could still use some help, but in general you feel comfortable with the information and are ready to move on. At this stage the student may just have a few clarifying questions they want to ask.

   • A "5," or holding up all five fingers, indicates that you feel completely comfortable with all of the information presented, you have no clarifying questions, and you are ready for new content or information.

2. Plan to use the fist-to-five strategy during instruction.

   • Determine in what parts of the lesson you will want to gauge the students' level of understanding.

   • Remember, you are trying to engage the students with the lesson and get an accurate idea of their level of understanding, so be sure that the ideas you ask them to rate are the key concepts in the lesson that students need to understand. You are not trying to trick them! You just want to know how they assess their understanding or comfort level.

3. Remind students before the lesson that you will be asking them to use the fist-to-five strategy at different points in the lesson. If you have not used the strategy for a few days, it might be necessary to give a brief refresher on the main points of the strategy.

4. After presenting information during the lesson, ask students to rate their understanding or comfort level on the information using fist to five. Allow a few seconds for students to provide a response. It may be necessary to provide an additional prompt if a few students have not responded. Give positive feedback to students for responding, regardless of the rating they provide. Remember, you are doing this to get their rating so that you can adjust your instruction!

5. Take note of the number of each response that you receive. This information will allow you to provide targeted instruction to those who need it or additional information to the entire group, depending on the responses from the students.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- Consider using a visual aid that depicts the ranking that is not too specific so that it can be used in various contexts.

- Consider helping students calibrate their responses by planned practice activities using the strategy with concepts and information that they already have been exposed to during previous instruction.

- Consider taking time periodically to go back and teach the strategy again. This is particularly helpful to students with disabilities or struggling learners in general.

- Ensure that students are able to provide their responses without other students seeing their response. This helps ensure that students are comfortable in providing accurate responses.

- Be sure to convey to students that it is okay to be at a level 1 or 2, or even a 0, in terms of understanding or comfort. The point is not for everyone to say that they have complete understanding and comfort—the point is to be able to engage students in the lesson at hand and to get an accurate assessment of individual student levels of understanding and comfort so that you can adjust your instruction accordingly.

STEP INTO THE FACE-TO-FACE CLASSROOM

Ms. Maddow thought the fist-to-five strategy would be most effective in promoting student self-assessment in a quick and efficient manner. To prepare for the lesson, Ms. Maddow created the following rating scale to gauge their perception:

- 5: I completely understand (I can teach it to others).
- 4: I mostly understand (I can show it to others).
- 3: I understand pretty well.
- 2: I need more practice.

(*Continued*)

(Continued)

- 1: I need help.
- 0: I don't understand at all.

After creating the rating scale, Ms. Maddow created a poster to be used as a visual. The visual included pictures of hands making each rating.

At the end of the lesson, Ms. Maddow asked the students to use the fist-to-five method to respond to the statement "What is your level of understanding of today's lesson?" Student responses ranged between 3 and 5, indicating a strong level of understanding. This allowed Ms. Maddow to take note of those students who might need additional support. Overall, Ms. Maddow was pleased with the fist-to-five strategy. She had increased student engagement in the lesson, and she was able to quickly assess student understanding.

Fist to Five

	I completely understand.
	I mostly understand.
	I understand pretty well.
	I need more practice.
	I need help.
	I don't understand at all.

Image source: pixabay.com/OpenClipart-Vectors

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider using a visual aid depicting the ranking that is not too specific, so that it can be used in various contexts.

- Consider having students wait for your signal to respond to reduce students being influenced by others.

- Consider tallying responses in real time with a writing instrument and paper, or record the session to go back and review.

- Be sure to convey to students that it is okay to be at level 1 or 2, or even a 0, in terms of understanding or comfort. The point is not for everyone to say they have complete understanding and comfort—the point is to be able to engage students in the lesson at hand and to get an accurate assessment of individual student levels of understanding and comfort so that you can adjust your instruction accordingly.

STEP INTO THE VIRTUAL CLASSROOM

Ms. Hayes decided to use the fist-to-five strategy at the beginning and end of an upcoming lesson on analyzing the components of a nutrition label. To prepare for the lesson, she created the following rating scale to gauge their perception:

- 5: I have complete understanding.
- 4: I mostly understand.
- 3: I understand pretty well.
- 2: I have some understanding.
- 1: I understand very little.
- 0: I don't understand at all.

After creating the rating scale, Ms. Hayes created a visual to be displayed on her computer screen. The visual included pictures of hands making each rating.

(*Continued*)

(Continued)

To start the lesson, Ms. Hayes displayed the visual and explained to the students,

> Today we are going to talk about the nutrition labels that we see on our food products. Before we get started, I want to see how much you already know. Show me with your hands your level of knowledge about nutrition labels. It can be from a fist, meaning you don't understand at all, to a 5, meaning you have a complete understanding.

Ms. Hayes looked at the grid of students on the computer screen and waited until she saw a response from all the students. She quickly noticed that most of the responses ranged from 1 to 3.

To end the lesson, Ms. Hayes asked her students to self-assess their knowledge again. She displayed the fist-to-five visual on the computer screen and said, "Now that we have learned more about nutrition labels, I want you to show me your level of understanding from fist to five." Ms. Hayes looked at the grid of students and noticed that most of the responses were 3. She replied, "It looks like most students understand pretty well, which is good. We will continue learning more about analyzing nutrition labels in our next class as well."

ADVANTAGES/DISADVANTAGES

There are some obvious advantages in using the fist-to-five strategy. First, there are no materials required. The strategy can be easily employed during essentially any instructional situation. Additionally, the strategy allows teachers to not only increase student engagement with the lesson but also collect assessment data that, in turn, will help inform instruction. Knowing how students assess their own understanding and comfort levels on the content allows the teacher to meet the students where they are functioning. If students need additional instruction or support, the teacher is able to know that and provide what is necessary for them to succeed. In terms of disadvantages, we have to remember that we are asking students to self-assess. This can potentially be problematic because what one student might rate as a "2" in terms of understanding might be rated as a "3" or even a 1" by another student. Calibrating responses across different students can be difficult. It is important that the teacher has a good understanding of different students and how they rate themselves.

FINGERS FOR NUMBERS

STEP INTO THE
FACE-TO-FACE CLASSROOM

Ms. David, a middle school social studies teacher, knows that she needs to prepare her students for the upcoming unit exam. She typically displays multiple-choice questions on the interactive whiteboard and asks students to respond, but this has not been effective. The classroom becomes chaotic as some students try to yell the answer out at the same time while others become disengaged. She needs something to get all the students involved, without the opportunity to yell out the answer.

STEP INTO THE
VIRTUAL CLASSROOM

Ms. Cassiman is teaching her fifth-grade class online. Although most of the instruction is given asynchronously, where students watch videos and complete assignments on their own time, they meet online as a group for one hour each day. When Ms. Cassiman teaches face-to-face, she enjoys using response cards to actively engage her students, but she is concerned that not all of her students can keep up with them at home.

The fingers-for-numbers strategy allows students to respond to prompts from teachers in a nonverbal way by using their fingers to represent actual numbers as the response. The numbers that students use as responses can correspond to numbered options that have been presented by the teacher, or actual numbers themselves when a question from the teacher requires a response in the form of a number.

Image source: unsplash.com/@hindawi

BIG IDEA

Students respond to teacher queries by holding up a finger to represent a number. This strategy should only be used when the desired response can be given as a number. This could include responses where the answer is provided as a number option. For example, the teacher could have four possible responses on the board and ask students to indicate if the correct answer is number 1, 2, 3, or 4. Or the strategy can be used when the answer is an actual number. For example, the teacher could ask how many seasons are there in one year. In either case the students respond nonverbally by holding up a finger that represents their response.

Step-by-Step Directions for Use

The fingers-for-numbers strategy requires very little setup other than providing instructions to students on how to respond to queries that require a response using a finger as a number. While it can be used in a planned or an unplanned manner, it works best if teachers plan for when the strategy can best be integrated into the instructional plans of each lesson.

1. Teach students the fingers-for-numbers strategy.
   - Teach the specific signal that will be used to occasion the student response.
   - Practice the procedure a few times so that students are comfortable with the procedure.
2. Plan to use fingers for numbers during specific points of instruction.
   - Determine what the questions will be.
   - Make sure that the possible response choices are clear to the students.
   - Make sure that there is a definitive correct answer.
3. Provide reminders to students immediately preceding its use that you are about to use the fingers-for-numbers strategy.
4. After presenting the question, let students know that you are about to provide a signal for them to respond.
   - The signal can simply be the teacher verbally asking the question.
   - Other signals could include a hand motion, a nod, snapping of the fingers, or other physical or gestural prompts.
   - It is important to provide a small amount (i.e., three to five seconds) of wait time between asking the question and signaling for a response. This allows students enough time to process their potential response.

5. After presenting the signal, scan the room for responses.
   - This will allow you to see all who are participating.
   - This also allows you to check for the accuracy of responses.
6. Provide feedback.
   - Provide positive feedback for correct responses.
   - Provide corrective feedback for incorrect responses.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

- Remember to teach the process to students. They must know how they are expected to respond, and they must know the signal that occasions their response.

- To reduce anxiety and students looking at other students' responses, consider having students put their hands in front of their chest.

- Consider pairing students with cognitive deficits, students with disabilities, or struggling learners with a peer who can help with responding.

- Consider having students work in small groups sometimes, and provide them with an opportunity to discuss their response as a group before responding to a query from the teacher.

- Be sure that students are attending before asking the question and providing the signal for a response. The point is not to catch those not attending to the lesson—the point is to increase their engagement in the lesson.

STEP INTO THE FACE-TO-FACE CLASSROOM

Ms. David thought that the fingers-for-numbers strategy would be a great way to prepare her students for the unit exam. Because she already had the review questions created, all she needed to do was put

(*Continued*)

(Continued)

each multiple-choice question on a digital presentation slide, which she would display on the classroom's interactive whiteboard. The only modification she made was to replace the letters (a, b, c, and d) with numbers (1, 2, 3, and 4).

To begin the review, Ms. David told the class,

> We are going to try something a little different to review what we have learned about the Vietnam War. I am going to display a multiple-choice question and give you 30 seconds to think of an answer. No one is to say a word during this time. Then when I say, "Show me your fingers," you are going to raise the number of fingers of your answer. Okay? Let's try the first question.

Ms. David displayed the question below:

What was the name given to the communist insurgents fighting in South Vietnam?

1. The People's Army of Vietnam

2. The Viet Cong

3. Army of the Republic of Vietnam

4. Khmer Rouge

After 30 seconds, Ms. David gave the students the signal "Show me your fingers" and waited until everyone had an answer. She told them that the correct answer was the Viet Cong. She then continued this process for the rest of the questions.

Ms. David was pleasantly surprised with how this simple strategy allowed all students to participate without the classroom becoming chaotic. Additionally, she was able to quickly assess student learning without calling on individual students.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Remember to explicitly teach the signal that you will use to prompt a student response.

- Consider asking follow-up questions immediately after students raise their hand.

   - Ask students to justify or clarify a response, and then call for a revote.

- To prevent students yelling out answers, have students mute their audio so that you will only see their hands.

- To differentiate, have only one student respond with fingers, then ask the others to give a thumbs up/thumbs down if they agree or not.

STEP INTO THE VIRTUAL CLASSROOM

The students were asked to read a portion of the book *The Borrowers* by Mary Norton, and Ms. Cassiman wanted to give them a few quick comprehension questions to begin the discussion. She thought the fingers-for-numbers strategy would be an effective way to have all students engage in the activity. To prepare, she created multiple-choice comprehension questions on a digital presentation slide, which she would display on her computer screen.

To begin the activity, Ms. Cassiman asked all of her students to mute their computer audio. She then stated,

> As a warm-up, I am going to ask you a few questions about the book we are reading. I am going to show you a multiple-choice question on the screen, and you will have 15 seconds to think of an answer. When you hear the sound of the timer, I want you to show me your answer with your fingers. First question.

Ms. Cassiman displayed the question below on the computer screen and set a visual timer of 15 seconds.

Question 1: How did the little people get the name "The Borrowers"?

1. They borrow things from humans to live.
2. They made it up.
3. It is the name of their house.
4. It is their last name.

When the students heard the sound of the visual timer, they all showed the number one with their fingers in unison. Ms. Cassiman stated, "Yes, they borrow things from humans to live. Great job! Everyone got that answer correct! Let's try a few more."

On reflection, Ms. Cassiman thought that the fingers-for-numbers strategy worked just as well as the response card in engaging all of her students. The activity went so well that she was determined to incorporate the strategy into other content areas as well.

ADVANTAGES/DISADVANTAGES

One major advantage of using fingers for numbers is its simplicity. You do not need any tangible items to employ the strategy. Also, the strategy can be used in a variety of academic content areas. With very little training needed on how to use the strategy, fingers for numbers can be easily used with students across content areas by teachers with any level of experience. One minor disadvantage is that using the strategy does take some planning on the part of the teacher to ensure that instructional material is prepared in a way that allows students to respond with numbers. Obviously, this type of strategy does not work in instances where open-ended responses are expected.

THUMBS UP/THUMBS DOWN

Thumbs up/thumbs down is simply providing students with a means to respond nonverbally to questions or ideas that are presented in class during instruction. Usually, thumbs up/thumbs down signals agreement or disagreement with something stated in class, but it can also convey like or dislike of something, a feeling of good or not good, or even a general understanding or not understanding, depending on the topic being covered in class.

Image source: unsplash.com/JeswinThomas

BIG IDEA

Students respond to queries from the teacher by indicating a thumbs up gesture or a thumbs down gesture. This can be used to indicate agreement or disagreement with a particular statement. For example, the teacher may make a statement about the cause of the Civil War and then ask students if they agree or disagree with the statement by showing a thumbs up or a thumbs down. Additionally, the strategy can be used to indicate if a problem was done correctly or not or if an answer is accurate or not. This use of the strategy could entail the teacher completing a mathematics problem on the board and then asking students if the answer is correct or incorrect, or if the problem was completed using the correct process. Regardless of the type of situation in which the thumbs up/thumbs down strategy is used, it is a simple nonverbal response system that allows the teacher to gauge student knowledge or perceptions about a specific topic.

Step-by-Step Directions for Use

The thumbs up/thumbs down strategy requires very little setup other than providing instructions to students on how to respond to queries that require a response using a thumbs up or a thumbs down. While it can be used in a planned or an unplanned manner, it works best if teachers plan for when the strategy can best be integrated into the instructional plan of each lesson.

1. Teach students the thumbs up/thumbs down strategy.
   - Teach the specific signal that will be used to occasion the student response.
   - Practice the procedure a few times so that students are comfortable with the procedure.
2. Plan to use thumbs up/thumbs down during specific points of instruction.
   - Determine what the questions will be.
   - Make sure that the possible response choices are clear to students.
   - With thumbs up/thumbs down, there does not always need to be a correct answer. In some cases, there may be a correct answer, and students will indicate agreement or disagreement with a specific answer. However, in some cases the student may be indicating how they feel about their level of understanding of a topic, or something similar. In those cases just closely monitor the student responses.

3. Provide reminders to students immediately preceding its use that you are about to use the thumbs up/thumbs down strategy.

4. After presenting the question, let students know that you are about to provide a signal for them to respond.

   • The signal can simply be the teacher verbally asking the question.

   • Other signals could include a hand motion, a nod, snapping of the fingers, or other physical or gestural prompts.

   • It is important to provide a small amount (i.e., three to five seconds) of wait time between asking the question and signaling for a response. This allows students enough time to process their potential response.

5. After presenting the signal, scan the room for responses.

   • This will allow you to see all those participating.

   • This also allows you to check for accuracy of responses or to review responses that are not necessarily correct or incorrect.

6. Provide feedback.

   • Provide positive feedback for correct responses (in cases where there are correct and incorrect responses).

   • Provide corrective feedback for incorrect responses (in cases where there are correct and incorrect responses).

   • In situations where students are responding to indicate if they understand something or if they agree with someone, provide feedback as appropriate based on the student responses.

CONSIDERATIONS AND DIFFERENTIATION FOR FACE-TO-FACE ENVIRONMENTS

• Remember to teach the process to students. They must know how they are expected to respond, and they must know the signal that occasions their response.

• Consider pairing students with cognitive deficits, students with disabilities, or struggling learners with a peer who can help with responding.

• Consider having students discuss their responses in small groups before responding to a query from the teacher.

• Be sure that students are attending before asking the question and providing the signal for a response. The point is not to catch those not attending to the

lesson—the point is to increase their engagement in the lesson.

- Be sure to provide feedback to students in a timely manner. If they respond with a correct response, provide positive feedback. If their response is incorrect, provide corrective feedback. Be certain to follow up with additional instruction or information as needed.

STEP INTO THE FACE-TO-FACE CLASSROOM

Mr. Jackson decided to have his students use hand signals to respond to him during the lesson. While teaching a lesson on fractions, Mr. Jackson asked the students to give a thumbs up or thumbs down to the statement "The top number in this fraction is the numerator." He lets the students think for three to five seconds and then scans their responses. All the students had a thumbs up, which indicated the correct answer. Had anyone had a thumbs down, Mr. Jackson would have needed to provide feedback differently to that student than he did for the other students.

CONSIDERATIONS AND DIFFERENTIATION FOR VIRTUAL ENVIRONMENTS

- Consider giving students three choices: (1) thumbs up if you agree, (2) thumbs down if you disagree, and (3) thumbs to the side if you don't know. If concerned about a student always choosing the "I don't know" option, limit their opportunities (e.g., the option can be used only three times per lesson).

- Consider combining with individual questioning strategies (see Section 1), where students are prompted to agree or disagree with an answer by showing a thumbs up or thumbs down.
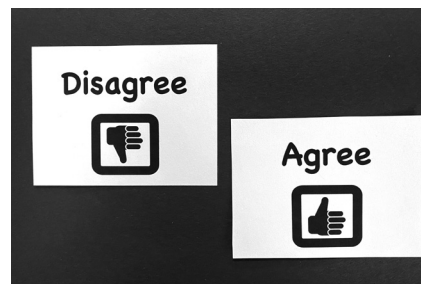
- Consider asking follow-up questions immediately after students show a thumbs up or a thumbs down.

  - If using as an agree/disagree option, select students to justify their reasoning (e.g., "You disagree. Why?").

  - If using for students to self-assess understanding, select students to explain their answer (e.g., "Is there something specific that is giving you trouble?").

STEP INTO THE VIRTUAL CLASSROOM

Ms. Casey thought using the thumbs up/thumbs down strategy would be an effective, low-risk strategy to increase engagement for all students. Because she is just interested in all students participating, she decided to modify the strategy to include three choices: thumbs up if you agree, thumbs down if you disagree, and thumbs to the side if you don't know.

When reviewing the relationship among latitude, longitude, and temperature in science, Ms. Casey posed the following question to the class: "How is latitude related to temperature?" She then asked for volunteers to raise their hand. She called on a student, who replied, "The farther you get from the equator, the colder it gets." Ms. Casey immediately replied, "Okay class, give me a thumbs up if you agree, a thumbs down if you don't agree, and a thumb to the side if you just don't know." After seeing some students not responding, she said, "I see some students are still deciding. We will wait until everyone has made their decision." After everyone had their thumbs up, Ms. Casey continued, "If you had your thumbs up, you are correct! The relationship between latitude and temperature involves temperatures typically being warmer when approaching the equator and cooler when approaching the poles."

Ms. Casey paid particular attention to the few students who were usually reluctant to participate. She could see that they were still a little hesitant to answer and may have been copying other students' responses, but that was okay. This was just an attempt to build their confidence in participating with a low-risk request.

ADVANTAGES/DISADVANTAGES

The thumbs up/thumbs down strategy has numerous advantages. First, it is a simple strategy that can be used in a variety of situations. It can be used to indicate agreement if

something is correct or not correct, or even to let the teacher know if the student understands the topic at hand. In addition, it is a strategy that students have usually used as part of their normal communication techniques for most of their lives. The thumbs up/thumbs down signal is generally a universal form of communication that can be used in a variety of settings and situations, and it does not require any tangible items to employ it. It can be used within essentially any content area and at any age level of student. However, the strategy is not effective when a more in-depth student response is required, including open-ended responses, or when students are required to verbalize a specific response.