

# Stop, Slow, Go!

## What is it?

A tool that provides real-time feedback about the pace and effectiveness of classroom lessons

## What are the benefits of using this tool?

Determining how well students are following along during a classroom presentation is important, but it's not always easy. After all, you can't necessarily tell how well students are getting the material just by looking at them—and they're often reluctant to admit when they're confused. The Stop, Slow, Go! tool solves this problem by having students use colored index cards to provide on-the-spot feedback about the pace of instruction (*red* = stop, I'm lost; *yellow* = slow down; *green* = go ahead, I've got this!). The tool also prepares students to be more proactive and successful learners by teaching them to monitor their understanding and speak up when they're confused.

## What are the basic steps?

1. Prior to beginning a lesson, give each student three index cards: one red, one yellow, one green.
2. Explain the purpose of the cards (to tell you how well students are following along so that you can adjust instruction accordingly). Then explain the meaning of each color. Use a traffic light analogy to help students remember the color-coding system:



- |                    |   |   |
|--------------------|---|---|
| <i>Red card</i>    | → | STOP and reteach. I'm lost.                     |
| <i>Yellow card</i> | → | SLOW down. I'm not 100% clear about this.       |
| <i>Green card</i>  | → | GO forward! I'm understanding things perfectly. |

3. Begin your lesson. Stop every few minutes to gather feedback about the pace of instruction and students' grasp of the material. ("How well are you following along? Hold up the appropriate card.")
4. Respond to the feedback that students provide. Adjust the pace of instruction as needed, use probing questions to identify sources of confusion, and review or reteach material that's unclear.
5. Take note of students who are really struggling (red cards up when others have green) so that you can work with them at a later time. Identify high-achieving students as well (green cards up when others have red) so you can think about ways to challenge them.
6. Explain that students should *always* monitor their understanding of new material and speak up or take action if they're confused—not just when they're using this tool, and not just in your class, but all the time.

## How is this tool used in the classroom?

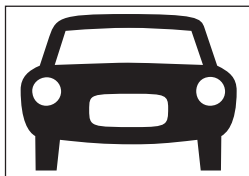
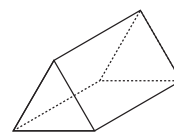
- ✓ To gather real-time feedback about the pace of instruction and students' grasp of the material
- ✓ To get students in the habit of assessing and monitoring their understanding of the content

**EXAMPLE 1:** A mathematics teacher used Stop, Slow, Go! cards to help deliver a more effective lecture on integer exponents and their related properties (Common Core 8.EE.A.1). She stopped at regular intervals to check her pace of instruction. (“Too fast, too slow, or just right?”) She also checked for understanding by giving students practice problems (e.g.,  $3^2 \times 3^{-5} = \underline{\quad}$ ) and asking them to “signal” their level of success. Whenever red and yellow cards outnumbered the green, she stopped to answer questions and clarify points of confusion. To keep her green students engaged, she invited them to help their red and yellow classmates.

**EXAMPLE 2:** After completing a unit on weather, a third-grade teacher was inspired to replace students' traditional Stop, Slow, Go! cards with weather-themed cards (clear skies, hazy, severe fog). Students used these cards during an end-of-unit review session to give her feedback about which topics to review in depth (severe fog) and which ones to breeze through (clear skies). Students continued to use their “weather cards” long after the weather unit was over since they preferred them to the red, yellow, and green cards they had been using before.

### Teacher Talk

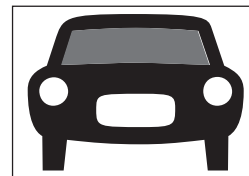
- ➔ Instead of stopping at various points to ask students how well they're following along, get a constant stream of feedback by having students fold an index card into thirds, tape the edges together to create a triangular prism (make each face a different color: red, yellow, green), and rotate their prisms on their desks throughout a lesson to reflect their comfort level (e.g., red-face forward if they're lost).
- ➔ Look for other ways to use the tool's color-coding system. If students are working at their seats (alone or in groups), for example, have them place a colored card on their desks to signal that they do (red) or don't (green) need help.
- ➔ Feel free to change things up. Instead of red, yellow, and green “traffic light cards,” for example, create “weather cards” (see Example 2), “cartoon-face cards” (smiles, puzzled looks, frowns), or “windshield cards” like the ones below, which were inspired by the Glass/Bugs/Mud technique (Narvaez & Brimijoin, 2010). If you prefer, you can forgo the index cards entirely and use hand signals instead (e.g., thumbs up, thumbs down, thumbs to the side).



CLEAR



A BIT BUGGY



TOTALLY MUDDY

- ➔ Talk to students about the importance of admitting when they're confused. If they understand that you're using Stop, Slow, Go! cards to help you teach them more effectively rather than to judge or grade them, they'll be more willing to do this.

# Memory Box

## What is it?

A review and assessment technique that has students draw a box on paper and fill it with everything they can remember about a given topic (facts, formulas, dates, etc.)

## What are the benefits of using this tool?

Think “review” and you’ll probably conjure up images of worksheets, recitations, and maybe a review game here and there. But what if you could redesign review sessions so they provided more information about each student’s mastery of the content, took little classroom time, and didn’t have the net effect of boring students to tears? Enter Memory Box, a quick and engaging review technique that helps students solidify their learning and lets teachers see what students remember and what’s eluding them. Because Memory Box is so easy to implement—all students have to do is fill a box with their memories in an allotted time—it can be used for more than end-of-lesson reviews. Use it before instruction begins to assess students’ prior knowledge or at any time during a learning sequence when you want to find out what students have committed to memory.

## What are the basic steps?

1. Give students a few minutes to review what they’ve learned about a specific topic or learning target. Once the time is up, have them put their notes, textbooks, and other review materials away.
2. Ask students to draw a box on paper and fill it with everything they can remember about the given topic or target. Among other things, encourage them to
  - List, define, or describe relevant terms.
  - Summarize key concepts and ideas.
  - Record important names, dates, and formulas.
  - Draw maps, timelines, symbols, and other images.
  - Use sketches and pictures to show what they know (ideal for primary-grade and ESL students).
3. Walk around the room as students work. Peek into their Memory Boxes to see what they know, and identify misconceptions and knowledge gaps that need to be addressed.
4. Use what you learn to guide future instruction. *Think:* What should I review, cover, or clarify?



### Teacher Talk

- Have students share and compare boxes with a partner to assess and deepen their knowledge.
- Check for depth of understanding by asking students to explain how the items in their boxes relate to one another (see Example 3) or flesh out their initial ideas (“I see that you’ve included Magellan in your Memory Box. Do you recall what he’s most famous for, when he lived, or what country he sailed for? Can you sketch his basic route?”).
- Variations and extensions on the basic Memory Box theme are described on p. 95.

## How is this tool used in the classroom?

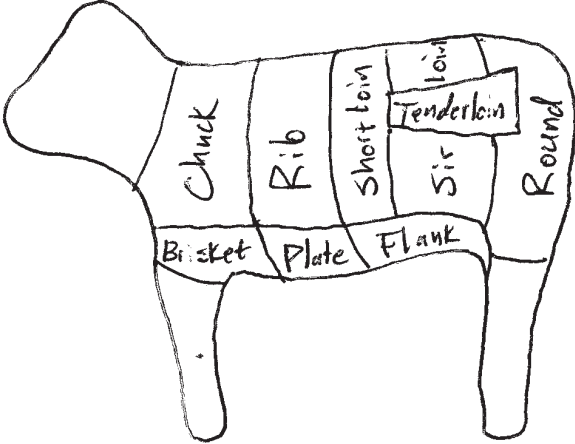
- ✓ To check (and have students check) for understanding at any point in the learning process

This tool is flexible enough to use at all stages of the learning process. Here are some options:

- Use it at the start of a lesson or unit to assess students' background knowledge.
- Use it at the start of a class period to determine what students remember from the day before.
- Use it after a lesson, activity, or homework assignment to see what has sunk in.
- Begin or end a test with a Memory Box question; see "Test" Your Memory, p. 95, for details.)

**EXAMPLE 1:** A culinary arts instructor used this tool to determine what his students had taken away from two days of lessons and demonstrations on preparing beef. One student's work is shown here:

### PREPARING BEEF

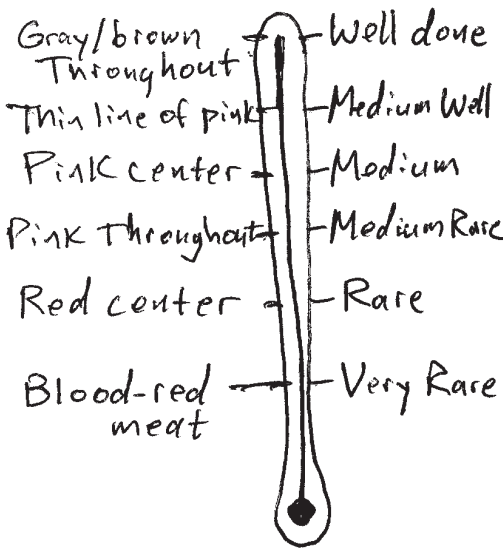


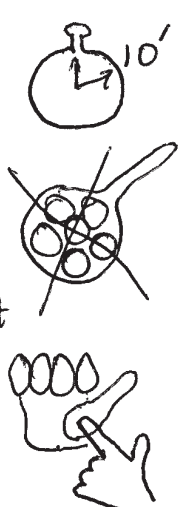
#### Cooking Methods

Dry-heat	Moist-heat
More tender, better cuts of beef -Grilling -Broiling -Roasting -Frying	Tougher Cuts of beef -Stewing -Braising

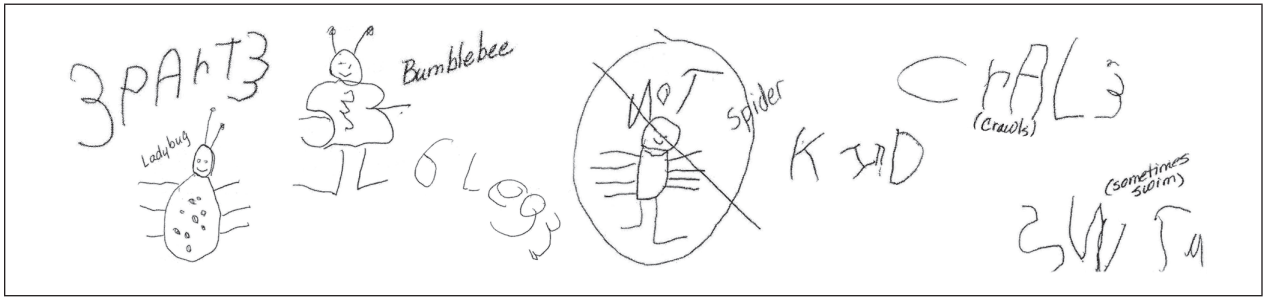
#### Steak Prep:

- Remove from fridge
- Preheat pan
- Don't overcrowd pan
- Use Chef's touch test for doneness
- Rest steaks 5 minutes before serving

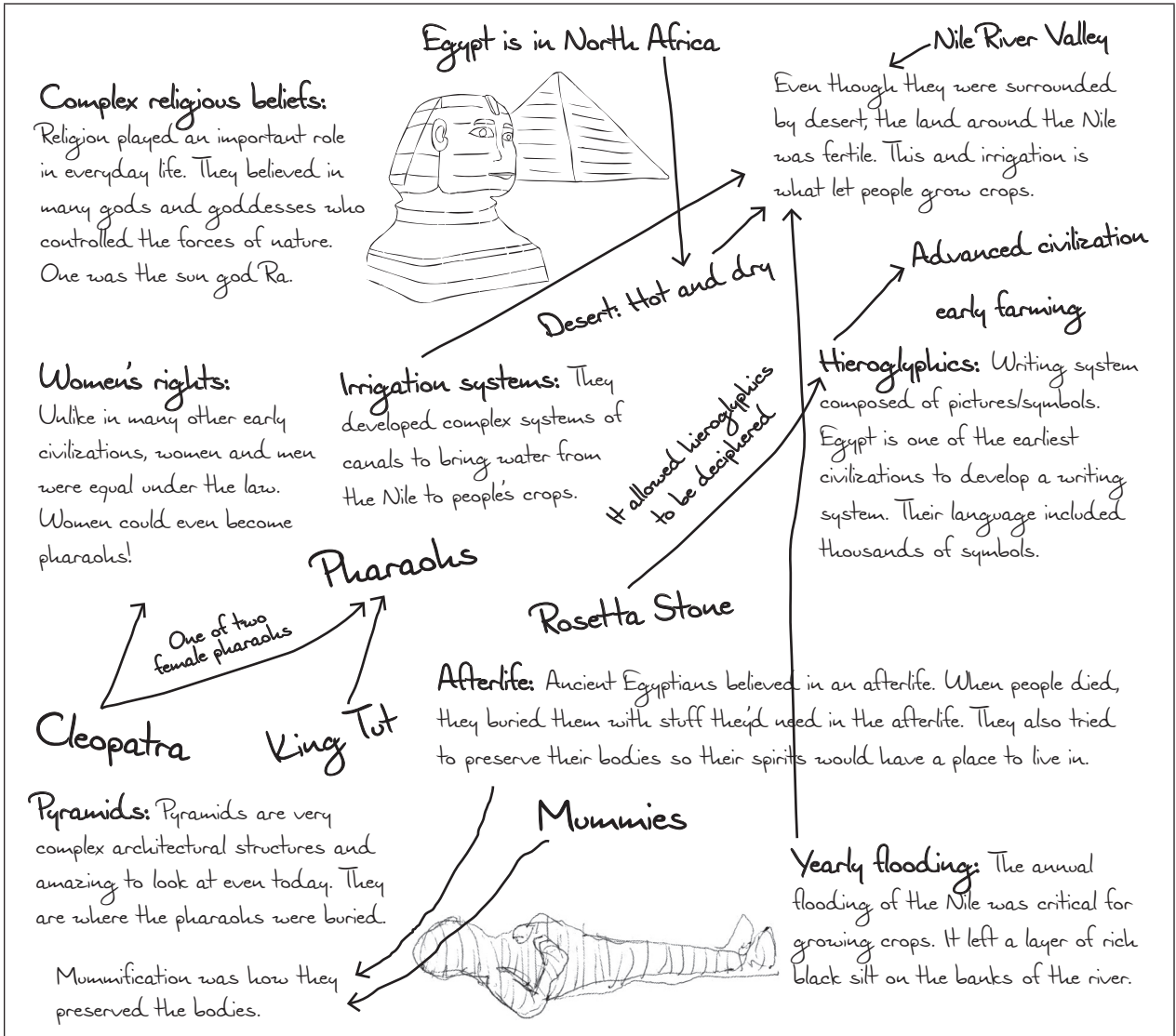




**EXAMPLE 2:** After listening to a book about insects, a kindergarten student created the Memory Box below with some help from her teacher.



**EXAMPLE 3:** A social studies teacher used Memory Box to see what students had learned from a week of lessons, readings, and activities about ancient Egypt. Besides listing relevant terms and information, students were asked to make and explain at least four connections between the items in their boxes (see arrows in sample below). They were also encouraged to add to their Memory Boxes each night for homework so they could see their knowledge increasing over time. Ultimately, many students ended up using these “expanded” Memory Boxes to study for the end-of-unit test.



## Variations and Extensions on the Basic Memory Box Theme

### **Class-Created Memory Box** (ideal for primary-grade students)

Have students create a Memory Box as a class (they speak their ideas aloud, you draw or write them on the board).

### **Memory Box Showdown**

Boost student engagement by adding in an element of competition. Have students compare the items in their Memory Boxes with a partner, award themselves a point for each idea that their partner doesn't have, and see who has the most points at the end.

### **Two-Minute Drill**

To help students review (and let you check their understanding of) the content from a single lesson, use a speedier version of Memory Box called Two-Minute Drill. In a Two-Minute Drill, students get two minutes to complete each of the following "R" tasks:

- **Review** their notes, textbooks, or other relevant materials.
- **Record** what they remember on paper—facts, big ideas, quotations, etc.
- **Revise** their lists with a partner (share, refine, and review ideas).
- **Rack up points** (change partners, collect a point for each item their partner doesn't have).

### **Memory Box Notes**

Facilitate understanding by having students take Memory Box Notes rather than regular notes during a classroom presentation. Instead of frantically trying to copy down everything that you say, students listen while you speak—no note taking!—and create a Memory Box when you finish. Note that content material should be presented one chunk at a time to prevent students from getting overwhelmed. Stop after each chunk to let students create a Memory Box; help students fill in gaps/answer questions before presenting the next chunk.

### **Expanded Memory Boxes**

Have students add to their Memory Boxes over time as illustrated in Example 3.

### **Memory Box MVP**

To check for big-picture understanding, ask students to identify the most valuable point (MVP) in their Memory Box or create an MVP from scratch (one that summarizes/synthesizes the most important information). Then ask students to explain and justify their MVPs: "Why do you think that's the MVP?"

### **Memory Box Review Session**

Use students' completed Memory Boxes to initiate an in-class review session. Record (or have students record) the items in their Memory Boxes on the board. Discuss these items as a class and have students add to and/or revise the information in their original Memory Boxes.

### **"Test" Your Memory**

Have students create a Memory Box on a quiz or test.

- Begin a test with a Memory Box question to build students' confidence and help students retrieve what they know from memory. (*Fill this box with five things you know about this topic.*)
- End a test with a Memory Box question to give students a chance to demonstrate untested knowledge. (*Do you know anything else about this topic? Share three important facts or ideas in the box below.*)