

Metacognitive Skills

# Pushing the Limits of One's Knowledge and Skills



Grades 3-5

2/15/2023

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## GENERAL DIRECTIONS

This document contains general directions for helping students understand and develop proficiency for the skill of *Pushing the Limits of One's Knowledge and Skills* at the Grades 3-5 level. The set of instructional resources for this skill includes:

- Three instructional videos entitled lesson 1, 2, and 3 respectively. Each introductory video is accompanied by one or more shorter practice videos and directions for how to assess students in the content on the video and how to provide supplemental activities for students.
- Directions about how to set up situations to determine if students can demonstrate proficiency on this skill and how to assess students in those situations.
- Directions about how to set up situations to determine if students can demonstrate competence beyond proficiency and how to assess students in those situations.

There are a number of ways teachers might use these resources (pgs. 3-5). One way is to simply show the introductory video for each lesson. The first video introduces vocabulary important to this metacognitive skill. The second video describes basic facts about this skill. The third video provides examples and non-examples about this skill. After students view each lesson, the teacher can simply have a discussion with students about what they have learned.

A second way to use these resources is to have students also watch the practice videos after each introductory lesson video. In the practice video students are questioned about what they have learned and provided with answers and explanations regarding correct and incorrect answers.

A third way to use these resources is to have students assess themselves regarding their understanding of the content in each lesson. The teacher, then, uses students' self-assessments along with the teacher's own perceptions of students' levels of understanding to score students on each lesson and keep track of their progress.

Finally, within each of the three options, the teacher can also provide situations in which students are asked to demonstrate they are proficient in the use of the metacognitive skill as well as provide situations in which students can demonstrate that they can perform at a level that goes beyond proficiency.

## OPTION 1

### Lesson 1 Vocabulary

- Show the introductory video for Lesson 1.
- Have a discussion with students about what they learned.

### Lesson 2 Basic Facts

- Show the introductory video for Lesson 2.
- Have a discussion with students about what they learned.

### Lesson 3 Examples and Non-examples

- Show the introductory video for Lesson 3.
- Have a discussion with students about what they learned.

### Demonstrating Proficiency (If desired)

- Provide situations for students to demonstrate proficiency in the metacognitive skill.
- Use the Individual Student Response and Rating Sheet and the Class Tracking Sheet Reproducibles for Demonstrating Proficiency if desired.

### Going Beyond Proficiency (if desired)

- Provide situations for students to demonstrate capacity beyond the expected level of proficiency in the metacognitive skill.
- Use the Individual Student Response and Rating Sheet and the Class Tracking Sheet Reproducibles for Going Beyond Proficiency if desired.

## OPTION 2

### Lesson 1 Vocabulary

- Show the introductory video for Lesson 1.
- Show the practice videos for Lesson 1.
- Have a discussion with students about what they learned.

### Lesson 2 Basic Facts

- Show the introductory video for Lesson 2.
- Show the practice video for Lesson 2.
- Have a discussion with students about what they learned.

### Lesson 3 Examples and Non-examples

- Show the introductory video for Lesson 3.
- Show the practice video for Lesson 3.
- Have a discussion with students about what they learned.

### Demonstrating Proficiency (If desired)

- Provide situations for students to demonstrate proficiency in the metacognitive skill.
- Use the Individual Student Response and Rating Sheet and the Class Tracking Sheet Reproducibles for Demonstrating Proficiency if desired.

### Going Beyond Proficiency (if desired)

- Provide situations for students to demonstrate capacity beyond the expected level of proficiency in the metacognitive skill.
- Use the Individual Student Response and Rating Sheet and the Class Tracking Sheet Reproducibles for Going Beyond Proficiency if desired.

## OPTION 3

### Lesson 1 Vocabulary

- Show the introductory video for Lesson 1 and the practice videos if needed.
- Use the Individual Student Rating Sheet reproducible for Lesson 1 to have students assess themselves on the content in the video.
- Use Class Tracking Sheet reproducible for Lesson 1 to track student progress.

### Lesson 2 Basic Facts

- Show the introductory video for Lesson 2 and the practice video if needed.
- Use the Individual Student Rating Sheet reproducible for Lesson 2 to have students assess themselves on the content in the video.
- Use Class Tracking Sheet reproducible for Lesson 2 to track student progress.

### Lesson 3 Examples and Non-examples

- Show the introductory video for Lesson 3 and the practice video if needed.
- Use the Individual Student Rating Sheet reproducible for Lesson 3 to have students assess themselves on the content in the video.
- Use Class Tracking Sheet reproducible for Lesson 3 to track student progress.

### Demonstrating Proficiency (If desired)

- Provide situations for students to demonstrate proficiency in the metacognitive skill.
- Use the Individual Student Response and Rating Sheet and the Class Tracking Sheet Reproducibles for Demonstrating Proficiency if desired.

### Going Beyond Proficiency (if desired)

- Provide situations for students to demonstrate capacity beyond the expected level of proficiency in the metacognitive skill.
- Use the Individual Student Response and Rating Sheet and the Class Tracking Sheet Reproducibles for Going Beyond Proficiency if desired.

## PUSHING THE LIMITS OF ONE'S KNOWLEDGE AND SKILLS

### Video Lesson #1

After students have watched the video for lesson #1, and watched the practice videos, assess their level of understanding or skill.

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#### ASSESSING STUDENTS

The purpose of this lesson is to provide students with vocabulary terms that will help them understand the skill of Pushing the Limits of One's Knowledge and Skills. When students have completed watching the video, they should go through the practice videos which break up the content in the lesson into shorter videos each of which presents students with a review of a specific vocabulary term along with a set of questions that help them reinforce the meaning of the vocabulary term. When students have gone through the practice videos, the teacher should attempt to determine students' general levels of understanding relative to the vocabulary terms. Possible definitions for each term are listed below:

Vocabulary			
1.		Challenge	Something new and difficult which requires great effort.
2.		Comfort zone	A situation or activity that makes you feel safe, comfortable, or in control.
3.		Expectations	Strong beliefs about the way someone should behave or something should happen.
4.		Limits	The greatest amount, extent, or degree of something that you believe is possible.
5.		Pushing yourself	Going beyond your limits or outside of your comfort zone.
6.		Standards	A level of quality used to judge or compare something else.

The students' understanding of these terms should be generally accurate but not necessarily detailed or complete. To assess student understanding of each term, the teacher can ask students to fill out the *Individual Student Rating Sheet* for lesson #1 (see below) to record their answers. Note that this requires students to explain the term and then provide a self-rating of how well they understand the term using the values high, medium, and low. If students are not old enough to write their answers, they can draw a picture that represents the term to them and then explain their pictures verbally. Students' self-rating along with the information provided in their explanations should provide ample evidence so a teacher can determine students' level of understanding regarding the vocabulary terms.

If students don't seem to know a term, use one or more of the supplemental activities with them. Afterwards, ask students to explain the term again. The progress of the entire class can be tracked using the *Class Tracking Sheet* reproducible for this lesson (see reproducibles).

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### PROVIDING SUPPLEMENTAL ACTIVITIES

- Provide students with descriptions and definitions of the terms they are having trouble with.
- Provide students with pictures that represent terms they are having trouble with.
- Have students identify other terms that might relate to the skill of Pushing the limits of one's knowledge and skills.
- For those terms a student is unsure of, have them draw a picture that represents the meaning of the term.

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REPRODUCIBLES FOR LESSON #1:

**INDIVIDUAL STUDENT RATING SHEET**

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Students should rate themselves for each of the vocabulary terms using the following scale or an adaptation of it:

High (H): I know this word well.

Medium (M): I know something about this word.

Low (L): I don't understand this word.

Individual Student Rating Sheet			
	Self-Rating		Explanation or picture
1.		Challenge	
2.		Comfort zone	
3.		Expectations	
4.		Limits	
5.		Pushing yourself	
6.		Standards	

## CLASS TRACKING SHEET

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From the information provided in the student self-rating sheets and your interactions with students, rate each student on their overall status on vocabulary using the following scale or an adaptation of it:

High (H): The student recalls the general meaning of the terms with no major errors or omissions.

Medium (M): The student recalls the general meaning of the terms with some major errors or omissions.

Low (L): The student is very confused regarding the general meaning of the terms.

### Class Tracking Sheet

Student Name	Overall Status on Vocabulary	Comments Regarding Students

## Video Lesson #2

After students have watched the video for lesson #2 and watched the practice video, assess their level of understanding or skill.

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### ASSESSING STUDENTS

The purpose of this lesson is to provide students with some basic facts about Pushing the Limits of One's Knowledge and Skills. After students have watched the video, they should go through the practice video which breaks up the content into smaller chunks of information. When students have completed the practice video the teacher should attempt to determine their general understanding of the basic facts. This can be done by asking students to explain what they remember about the basic facts regarding Pushing the Limits of One's Own Knowledge and Skills thinking using the reproducible for this lesson. Students should rate themselves regarding their level of understanding.

If students require more instruction to improve their understanding, provide supplemental activities.

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### PROVIDING SUPPLEMENTAL ACTIVITIES

- Ask students to describe what they think is the most important reason to cultivate the skill of pushing the limits of one's knowledge and skills and explain why. Help them by providing your own answers to this probe.
- Ask students to describe some negative things that can happen if they don't cultivate the skill of pushing the limits of one's knowledge and skills and explain why. Help them by providing your own answers to this probe.

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REPRODUCIBLES FOR LESSON #2:

**INDIVIDUAL STUDENT RESPONSE AND RATING SHEET**

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Have students describe the basic information they learned about pushing the limits of one’s knowledge and skills using the individual student response sheet. Students should also rate their understanding of the basic information about pushing the limits of one’s knowledge and skills using the following scale:

High (H): I know the basic information about pushing the limits of one’s knowledge and skills well.

Medium (M): I know something about pushing the limits of one’s knowledge and skills but am confused about some things.

Low (L): I don’t understand much about pushing the limits of one’s knowledge and skills.

Individual Student Response and Rating Sheet	
Self-Rating	Explanation or picture

## CLASS TRACKING SHEET

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Rate each student on their overall understanding of basic information about pushing the limits of one's knowledge and skills using the following scale or an adaptation of it:

High (H): The student understands the basic information about pushing the limits of one's knowledge and skills.

Medium (M): The student understands information about pushing the limits of one's knowledge and skills with some major errors or omissions.

Low (L): The student is very confused regarding basic information about pushing the limits of one's knowledge and skills.



## Video Lesson #3

After students have watched the video for lesson #3 and watched the practice video, assess their level of understanding or skill.

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### ASSESSING STUDENTS

In this lesson students are presented with three short vignettes, one of which is a non-example and two of which are examples of the skill of Pushing the Limits of One's Knowledge and Skills. Students view a vignette and are then asked to determine if it is an example or a nonexample. After a few seconds they are provided with the correct answer.

After students have viewed the video, they should go through the practice video which breaks up the content into smaller chunks of information. When students have completed the practice video, the teacher should attempt to determine their general understanding of the examples and non-examples regarding Pushing the Limits of One's Knowledge and Skills. This can be done by asking students to recall and describe the three vignettes and explain what made them examples and non-examples. If students have difficulty remembering any of the vignettes provide them with a brief synopsis. Have students rate themselves on their ability to identify examples and nonexamples. Using students' comments and their self-ratings, rate each student on their ability to identify examples and nonexamples.

If students require more instruction to improve their understanding, provide supplemental activities.

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### PROVIDING SUPPLEMENTAL ACTIVITIES

- Have students explain how nonexamples can be turned into an example.
- Have students provide and explain more examples.
- Have students provide and explain more nonexamples.

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REPRODUCIBLES FOR LESSON #3:

**INDIVIDUAL STUDENT RATING SHEET**

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Ask students to use the following scale to rate themselves on their ability to identify examples and nonexamples:

High (H): I can identify things that are examples of pushing the limits of one’s knowledge and skills and things that are not.

Medium (M): I can sometimes identify things that are examples of pushing the limits of one’s knowledge and skills and things that are not.

Low (L): I have trouble identifying things that are examples of pushing the limits of one’s knowledge and skills and things that are not.

Individual Student Rating Sheet	
Self-Rating	Explanation or picture for examples and nonexamples

## CLASS TRACKING SHEET

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Rate students on their ability to identify examples and nonexamples of the skill of pushing the limits of one's knowledge and skills.

High (H): The student can identify examples and nonexamples of pushing the limits of one's knowledge and skills.

Medium (M): The student inconsistently identifies examples and nonexamples of pushing the limits of one's knowledge and skills.

Low (L): The student is very confused about examples and nonexamples of pushing the limits of one's knowledge and skills.



## Demonstrating Proficiency

After students have completed the three lessons, they should be ready to demonstrate proficiency. This involves accurately executing the basic process for pushing the limits of one's knowledge and skills. The basic process is: [1] identify something you could do during this task that would make you push yourself, [2] set a goal for what you will do, [3] when you're done with the task, evaluate how well you did. The teacher should set up a complex task that allows students to demonstrate this level of competency. For example, the teacher provides students with a task that requires them to push the limits of their knowledge and skills. Such tasks should have no obvious solution when initially addressed (e.g., brain teaser tasks). Students can be asked to record their responses on the *Individual Student Response and Rating Sheet for Demonstrating Proficiency*. When asked, students should be able to accurately determine if they are trying to use this skill.

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### PROVIDING SUPPLEMENTAL ACTIVITIES

- Provide students with other examples of pushing the limits of one's knowledge and skills.
- Provide students with other nonexamples of pushing the limits of one's knowledge and skills.
- Ask students to describe times when they were pushing the limits of one's knowledge and skills.
- Ask students to describe a time they should have been pushing the limits of one's knowledge and skills but were not.

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REPRODUCIBLES FOR DEMONSTRATING PROFICIENCY:

**INDIVIDUAL STUDENT RESPONSE AND RATING SHEET**

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To provide information to this end, other than teacher observation, students can be asked to rate themselves using the following scale:

High (H): I can tell when I'm pushing the limits of my knowledge and skills and when I am not.

Medium (M): Sometimes I can tell whether I'm pushing the limits of my knowledge and skills or not.

Low (L): I usually can't tell whether I'm pushing the limits of my knowledge and skills or not.

Individual Student Response and Rating Sheet for Demonstrating Proficiency		
	Self-Rating	Explanation or picture
Teacher probe #1		
Teacher probe #2		
Teacher probe #3		
Teacher probe #4		
Teacher probe #5		

## CLASS TRACKING SHEET

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Use the students' self-ratings and their observed behavior to rate each student using the following scale:

High (H): The student is able to determine when he or she is pushing the limits of one's knowledge and skills or not.

Medium (M): The student sometimes is able to determine when he or she is pushing the limits of one's knowledge and skills or not.

Low (L): The student is very confused regarding when he or she is pushing the limits of one's knowledge and skills or not.



## Going Beyond Proficiency

Students' can demonstrate capacity beyond the expected level of proficiency by critiquing how well they did using the skill of pushing the limits of one's knowledge and skills. They should be able to identify some things they did well and some things they need to improve on.

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### PROVIDING SUPPLEMENTAL ACTIVITIES

- Provide students with some of your own insights into the types of thinking that occur when you are pushing the limits of one's knowledge and skills. Then have students elaborate on your comments.
- Provide students with some of your own insights into the types of behavior that occur when you are pushing the limits of one's knowledge and skills. Then have students elaborate on your comments.

## INDIVIDUAL STUDENT RESPONSE AND RATING SHEET

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Have students describe their thinking and their behaviors when they use the skill of pushing the limits of one's knowledge and skills. Also have students rate their understanding of the type of thinking associated with pushing the limits of one's knowledge and skills and the actions that go with it using the following scale:

High (H): I know the type of thinking that goes with pushing the limits of one's knowledge and skills.

Medium (M): I know something about the thinking and actions that go with pushing the limits of one's knowledge and skills but am confused about some things.

Low (L): I can push the limits of my knowledge and skills but don't understand how I think when I'm doing it.

Individual Student Response and Rating Sheet	
Self-Rating	Explanation or picture

## CLASS TRACKING SHEET

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Using the following scale, rate each student on their understanding and awareness of the types of thinking and the types of actions that accompany pushing the limits of one's knowledge and skills:

High (H): The student understands the thinking and actions associated with pushing the limits of one's knowledge and skills.

Medium (M): The student understands the thinking and actions associated with pushing the limits of one's knowledge and skills with some major errors or omissions.

Low (L): The student is very confused about pushing the limits of one's knowledge and skills.

### Class Tracking Sheet

Student Name	Overall Status Regarding Advanced Performance on the Skill	Comments Regarding Students