



Kindergarten through Grade Twelve Standards for Mathematical Practice

Unit 6: Summary and Next Steps

CALIFORNIA DEPARTMENT OF EDUCATION
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Talking Points:

Welcome to Unit 6.

Unit 6: Summary, Next Steps, and Resources

- Module summary
- Suggested next steps
- Self-reflection survey
- Post-assessment
- Resources and glossary

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Facilitator Note:

- Review slide.

Module Summary

The learning objectives from previous units are compiled below to summarize this module and provide a sense of the scope and nature of the SMP.

- You should now be able to describe the difference between the content standards and the practice standards.
- You have been introduced to the eight SMP and why they are important.
- You should now be able to explain how the SMP define what it means for a student to be mathematical proficient.

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Facilitator Note:

- Review slide.

Talking Point:

- The next three slides review the learning objectives introduced in Unit 1.

Learning Objectives, Cont.

- You should now be able to describe why, to be successful in mathematics, all students need to:
 - Develop overarching habits of mind
 - Reason and explain
 - Model and use tools
 - See structure and generalize

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Facilitator Note:

- Review slide.

Learning Objectives, Cont.

- You should now be able to explain what it means for students to:
 - Make sense of problems and persevere in solving them
 - Attend to precision
 - Reason abstractly and quantitatively
 - Construct viable arguments and critique the reasoning of others
 - Model with mathematics
 - Use appropriate tools strategically
 - Look for and make use of structure
 - Look for and express regularity in repeated reasoning

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Facilitator Note:

- Review slide.

Looking Back

After exploring each of the previous five units, reflecting upon your learning, and acquiring ideas about how to bring the practices to your students, you should have a much more comprehensive understanding of the SMP.

Let's take a moment to revisit the first video you viewed in Unit 1 of this module.

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Facilitator Note:

- Review slide.

Looking Back

Re-watch the video of students engaged in doing mathematics that you first viewed in Unit 1. As you watch, take note of what you observe the students doing.

Grade 2: Classroom Discussion: Describing Patterns

Grade 6: Classroom Discussion: Sorting Angles

Grade 8: Classroom Discussion: Speed and Rate Using Technology

Videos available on the Brokers of Expertise Web site at
<http://myboe.org/portal/default/Content/Viewer/Content?action=2&scld=306591&scild=11776>

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Facilitator Note:

- Replay the videos of the same grade level span(s) previously viewed in Unit 1.

Small Group Discussion

In small groups, discuss the following:

- What do you see the students doing and in what ways are they engaged?
- Describe their thinking, problem solving, and interactions.

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Facilitator Note:

- Have participants discuss the questions in small groups, followed by whole group sharing.

Whole Group Discussion

On this second viewing of the video(s):

- Have your observations changed? Explain.
- What do you believe contributed to these changes?

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Facilitator Note:

- Continue whole group discussion, focusing in on how the engagement in the module contributed to a better lens to view students' learning.

Reflection and Implementation

Throughout the module, purposeful teaching has been emphasized; particularly the type of teaching that would increase students' use of the SMP.

Incorporating effective strategies and ensuring students are engaged in learning requires thoughtful planning.

How will you take what you learned into your classroom?

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Talking Points:

- In Unit 1, you were asked to reflect upon how you would implement what you learned about the SMP into your classroom.
- You have been provided multiple opportunities to reflect on your teaching and learning through entries in your Metacognitive Journal and in small and whole group discussions.
- Take some time to review your reflections and consider how you will take what you learned into your classroom.

[allow time for discussion and/or writing]

Taking Action: Planning Next Steps

- Retake the Self-Reflection Survey you completed in Unit 1 (**Handout 6.1.1**).
- Compare your responses to the initial survey (**Handout 1.2.4**).

How has your confidence in your ability to implement the SMP increased? Be specific.

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Facilitator Note:

- Refer Participants to the Self-Reflection Survey (**Handout 6.1.1**), followed by the initial survey (**Handout 1.2.4**) for comparison.
- Have pair-share or group discussion about how their confidence has increased (ask them to give examples).

Taking Action: Planning Next Steps

- How will you ensure all students, including English learners, students with special needs, underperforming, and advanced students are engaged in the SMP throughout the school year?
- What immediate changes can you make in your classroom to provide students opportunities to practice the SMP?
- How can you incorporate 21st Century Skills as you begin to implement the SMP?

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Talking Points:

- Read through your Metacognitive Journal entries and reflect on new knowledge gained from this module.
- Now it is time to record your next steps.
- Respond to the prompts to assist you in this process.

Facilitator Note:

- Give participants time to write responses, then share out.

Post-Assessment

Complete the Post-Assessment (Handout 6.1.2)

- Compare your results to the Pre-Assessment that you took in Unit 1
(Handout 1.0)

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Facilitator Notes:

- Refer participants to the Post-Assessment **(Handout 6.1.2)**.
- Allow 5 to 10 minutes to complete the assessment.
- Review answers as a group.
- Allow time for discussion of results.

Post-Assessment answers:

1. c
2. c
3. d
4. a
5. c
6. True
7. False
8. False
9. False

10. True

Closure

This module was designed to develop and enhance your understanding of the SMP, as well as provide you with meaningful experiences in how these practices can be implemented in your classroom.

As you begin planning instruction for the future, you may find that you have new questions and want more information.

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Facilitator Notes:

- Review slide.

Closure

- Think about how you can engage with colleagues to share your learning and build collaborations to learn together.
 - What support do you need?
 - Who are those colleagues?
- Think about how you might communicate to administrators, parents, and/or community members about the CCSS and the SMP.

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- Review slide.

Additional Information

Additional information is available on the
Brokers of Expertise Web site

<http://myboe.org/portal/default/Content/Viewer/Content?action=2&scld=306591&scild=11803>

- Acknowledgements
- Glossary of terms
- CCSS Mathematics Web sites
- Publications, research, and articles

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Facilitator Notes:

- Review slide.
- If time, navigate to the Standards of Mathematical Practice Web site and encourage participants to share with colleagues.

Completion

Congratulations!

You have completed

*Kindergarten through Grade Twelve Standards
for Mathematical Practice*

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Facilitator Notes:

- Review slide.
- If time, navigate to the Standards of Mathematical Practice Web site and encourage participants to share with colleagues.
- Offer a certificate of completion as applicable.