Math Lesson Internalization Protocol Note-Catcher

The note-catcher is intended to be used in conjunction with the [math lesson internalization protocol](https://education.ky.gov/curriculum/standards/kyacadstand/Documents/Math_Lesson_Internalization_Protocol.pdf) document as a tool to capture thinking. For streamlining purposes, it does not contain all the content or guiding questions from the protocol.

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| **UNDERSTAND: Internalize Lesson Notes and Complete Formative Task(s)** |

| **Focus Area**  | **Notes** |
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| 1. Identify the Standards: “Which of the unit standard(s) or part(s) of standards from the [KAS for Mathematics](https://education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf) are addressed in this lesson?”
	1. Consider the Standards for Mathematical Content and the target of each standard.
	2. Consider the Standards for Mathematical Practices students will use.
 | Standard(s): \_\_\_\_\_\_\_\_\_\_\_

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| **Identify the Target of the Standard:** |
| ð **Conceptual Understanding** refers to understanding mathematical concepts, operations and relations. Conceptual understanding is more than knowing isolated facts and methods; students should be able to make sense of why a mathematical idea is important and the kinds of contexts in which it is useful. Conceptual understanding allows students to connect prior knowledge to new ideas and concepts.ð **Procedural Skill/Fluency** is the ability to apply procedures accurately, efficiently, flexibly and appropriately. It requires speed and accuracy in calculation while giving students opportunities to practice basic skills. Students’ ability to solve more complex application and modeling tasks is dependent on procedural skill and fluencyð **Application** provides a valuable context for learning and the opportunity to solve problems in a relevant and a meaningful way. It is through real-world application that students learn to select an efficient method to find a solution, determine whether the solution(s) makes sense by reasoning and develop critical thinking skills. |
| **Identify the Practice Standard:** |
| ð [MP.1.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=12) Make sense of problems and persevere in solving them. ð [MP.5.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=14) Use appropriate tools strategically.ð [MP.2.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=13) Reason abstractly and quantitatively. ð [MP.6.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=14) Attend to precision.ð [MP.3.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=13) Construct viable arguments and critique the reasoning of others. ð [MP.7.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=14) Look for and make use of structure. ð [MP.4.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=13) Model with mathematics. ð [MP.8.](https://www.education.ky.gov/curriculum/standards/kyacadstand/Documents/Kentucky_Academic_Standards_Mathematics.pdf#page=15) Look for and express regularity in repeated reasoning. |

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| 1. Complete the Formative Task(s): “What math skills/concepts from the standards are assessed in today’s lesson?”
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| 1. Read and annotate any teacher’s notes for the lesson: “*What* are students learning?”
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| 1. Read and annotate lesson, including any teacher’s notes: “*How* are students supported in their learning?”
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| **TAKE STOCK: Identify Learning Gaps and Student Needs** |

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| **Focus Area** | **Notes** |
| 1. Understand your students, their strengths, and anticipate the challenges they might face.
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| **TAKE ACTION: Make Adjustments to Lesson**  |

| **Focus Area** | **Notes** |
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| 1. Prioritize and adjust the lesson: “How can I tailor this lesson to the specific needs of my students?”
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| 1. Reflect on the planned lesson: “Do the lesson adjustments and added supports align with the standard(s) and the learning goal(s)?”
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