

# CHECKLIST TO GUIDE MATHEMATICS LESSON DEVELOPMENT<sup>1</sup> (MATH TOOL 6)

This checklist is designed to accompany your development of a lesson and serve as a final quality check of that lesson for the lesson study.

- 1. Set up the lesson and establish the learning goals:** What are the learning goals for students in this lesson? What must students know and be able to do to meet the goals? How long should this lesson take to complete (e.g., number of class sessions or hours)?

*The introduction to the lesson answers these questions.*

Notes:

- 2. Identify the level-specific College and Career Readiness (CCR) Standards for Mathematics that are the targets of the lesson:** What CCR content standards are targeted in the lesson? Do they represent the Major Work of the Level (MWOTL)?<sup>2</sup>

*The lesson targets standards that represent the MWOTL.*

*The focus of supporting work is on enhancing the MWOTL.*

Notes:

<sup>1</sup> Drawn from essential elements of the *Lesson Planning Tool* from Student Achievement Partners. Accessed January 18, 2015: <https://achievethecore.org/page/962/lesson-planning-tool>

<sup>2</sup> Use the CCR Content Progressions (#2) to assist with the selection and identification of content for Items 2 and 4.

**3. Identify workplace contexts for the lesson:** What workplace skills are targeted in the lesson? Is the lesson contextualized to a sector focus?

- Appropriate skills from the Foundation Skills Framework are targeted.*
- There are descriptions about connecting content to appropriate career pathways.*

Notes:

**4. Identify the Standards for Mathematical Practice that are the focuses of the lesson:**

What specific Standards for Mathematical Practice are central to the goals of this lesson? How can students' abilities to apply those practices be observed and assessed?<sup>3</sup>

- At least one and no more than four Standards for Mathematical Practice are targeted.*
- There are descriptions about how to make meaningful connections between the content and the selected Standards for Mathematical Practice.*

Notes:

<sup>3</sup> Use the Standards for Mathematical Practice (#3) to assist with the selection of practices for Item 3.

**5. Address how the lesson contributes to coherence:** What foundational knowledge is needed for successful learning in this lesson? How do concepts acquired in this lesson support future learning?

- Foundational knowledge is clearly identified.*
- Connections are made as to how the content of this lesson supports, and is connected to, future learning.*

Notes:

**6. Address rigor:** Which aspect(s) of rigor are required by the targeted standards? Do the tasks and activities of the lesson address those aspects? What thought-provoking problems or tasks is the whole class asked to solve? On which problems or tasks will students work independently or with a partner or small group?

- Problems and tasks reflect the lesson's targeted aspects of rigor.*
  - Tasks and activities address conceptual understanding. Examples of words that signal conceptual understanding are "understand," "interpret," "recognize," "describe," and "explain."*
  - Tasks and activities address procedural skill and fluency. Examples of words that signal procedural skill and fluency are "fluently," "compute," "convert," and "rewrite."*
  - Tasks and activities address application. Examples of phrases that signal applications are "real world" and "word problems."*
- Directions are provided on when the problems should be solved independently, with partners or small groups, or as a whole class.*

Notes:

**7. Include essential mathematical vocabulary:** What explanations, representations, and/or examples are needed to make the mathematics of this lesson clear?

- Mathematical terms important to the concepts of the lesson are identified and defined.*
- Examples, including explanations, diagrams, graphs, and/or charts, are given to provide a clear understanding of the mathematical language, situation, or context.*

Notes:

**8. Identify discussion questions that allow students to share their thinking:** When will student sharing happen in this lesson? What are the expected responses to the discussion questions? How will student understanding be judged based on the discussion?

- High-level discussion questions are provided to encourage deep mathematical thinking.*
- Expected sample student responses and suggestions for interpreting those responses are provided.*

Notes:

**9. Develop checks for understanding:** What strategies and opportunities will be used to check for student understanding throughout the lesson?

- Formative and self-assessments that are connected to the lesson's goals are included.*
- Summative lesson or unit assessments that are connected to the lesson's goals are included.*
- Answer keys are provided for all assessments, along with rubrics or guidelines for interpreting student performance when needed.*

Notes: