

CCR Observation Tool for Mathematics

April 2022

With the goal of maximizing student learning in adult education classrooms across the Commonwealth, all publicly funded Virginia adult education programs are expected to offer standards-based instruction. The **College and Career Readiness Standards for Adult Education (CCRS)** are Virginia’s state-adopted standards for adult education. For English language acquisition and other instruction provided to English language learners, educators are encouraged to consult and use the **English Language Proficiency Standards (ELPS)**, which provide standards and guidance for supporting language learners in reaching college and career readiness goals.

This observation tool¹ provides concrete examples of what college and career readiness (CCR) standards in mathematics look like in daily planning and practice. It is a tool for instructors, those who support instructors, and others working to implement CCR standards—it is not designed for use in evaluation. When observing multiple classrooms, this tool can be used with the Aggregation and Summary of Observation Data Tool to highlight program-wide strengths and weaknesses in standards implementation and suggest professional development priorities.

Key Advances Required by CCR Standards: The key advances identify the most significant elements of the CCR standards. At the heart of these advances is a focus in mathematics instruction on delving deeply into the key processes and ideas upon which mathematical thinking and reasoning rely. They include:

- 1. Focus:** Focus strongly where the standards focus.
- 2. Coherence:** Think across levels and link to major topics within levels.
- 3. Rigor:** Pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

¹ This tool has been adapted from the Standards-in-Action CCR Observation Tool for Mathematics to make use of a numeric rating system instead of yes/no scoring. StandardsWork Inc. produced the CCR Observation Tool under contract to the U.S. Office of Career, Technical, and Adult Education as part of the CCR SIA (College and Career Readiness Standards-in-Action) project, 2013–2016, in which Virginia was a pilot participant.

Core Actions: The core actions center on a set of instructional practices that are derived from the standards and directly related to the mathematical concepts students must learn. They are:

Core Action 1. Curriculum content of the lesson matches the demands of the CCR standards.

Core Action 2. Learning activities (questions and tasks) are challenging and maximize opportunities for students to master the lesson content.

Core Action 3. CCR standards are translated into lesson content that productively engages adult learners.

Core Action 4. The lesson is intentionally sequenced to build on and develop students' skills and knowledge of specific concepts.

Core Action 5. Students' levels of understanding are assessed throughout the lesson, and instruction is adjusted accordingly.

Directions: In the column next to each core action indicator, note any evidence you observe. Evidence can be something the teacher or students do, or something you observe in the materials or in the classroom. Then, score the indicators appropriately:

Thoroughly Evident (4 points)

Mostly Evident (3 points)

Somewhat Evident (2 points)

Minimally Evident (1 point)

No Evidence (0 points)

If an indicator is not evident because it is not applicable in that particular observed lesson, then mark it as "N/A."

Remember, the process for observing effective teaching and learning practices is not linear. In many cases, determinations about whether certain core actions and indicators are evident will not become clear until the lesson is over. Others will be evident early in the lesson. It is fine to take detailed notes and then review them after the lesson. See the final page of this tool for recommended observation procedures.

CORE ACTION 1. Curriculum content of the lesson matches the demands of the CCR standards.		Thoroughly Evident 4	Mostly Evident 3	Somewhat Evident 2	Minimally Evident 1	No Evidence 0	N/A
A. Instructor presents a lesson clearly reflecting CCR content standards.	Evidence Observed:						
B. Instructor presents a lesson that addresses the Standards for Mathematical Practice that are central to the goals of the lesson and connected with the targeted content.							
C. Instructor presents a lesson that matches the full depth of the requirements in the standard(s) being addressed.							
D. Instructor establishes well-defined standards-based lesson goals.							
E. Instructor presents a lesson that focuses on standards representing or supporting the Major Work of the Level (MWOTL).							
F. When addressing the MWOTL, the instructor intentionally targets one or more aspects of rigor as appropriate for the addressed standard(s). Mark the aspect(s) of rigor the lesson addresses: <input type="checkbox"/> Conceptual understanding <input type="checkbox"/> Procedural skill and fluency <input type="checkbox"/> Application							

CORE ACTION 2. Learning activities (questions and tasks) are challenging and maximize opportunities for students to master the lesson content.		Thoroughly Evident 4	Mostly Evident 3	Somewhat Evident 2	Minimally Evident 1	No Evidence 0	N/A
A. High-quality, challenging questions and problems prompt students to discuss their developing thoughts about the lesson content.	Evidence Observed:						
B. Students have opportunities to work with and practice level-specific problems and exercises.							
C. Instructor consistently uses explanation, modeling, or examples to make the mathematics of the lesson explicit.							
D. Instructor consistently allows appropriate wait time after asking questions of students before prompting them for responses.							
E. Students consistently use precise mathematics in their calculations, terminology, symbols, graphs, etc.							
F. Instructor consistently asks students to elaborate on and justify their responses.							

CORE ACTION 3. CCR standards are translated into lesson content that productively engages adult learners.		Thoroughly Evident 4	Mostly Evident 3	Somewhat Evident 2	Minimally Evident 1	No Evidence 0	N/A
<p>A. Students consistently participate actively in the lesson through class discussions and activities, group projects, etc., instead of mostly doing solitary seatwork or listening to extended lectures.</p> <p>B. Students have varied opportunities to apply what they are learning in authentic or practical adult-oriented contexts.</p> <p>C. When discussing or collaborating, a vast majority of students build on each other’s observations or insights (e.g., showing variation in their solution methods).</p> <p>D. A vast majority of students display persistence with tasks and problems.</p>	Evidence Observed:						

CORE ACTION 4. The lesson is intentionally sequenced to build on and develop students' skills and knowledge of specific concepts.		Thoroughly Evident 4	Mostly Evident 3	Somewhat Evident 2	Minimally Evident 1	No Evidence 0	N/A
A. Instructor explicitly relates new concepts to students' knowledge.	Evidence Observed:						
B. Instructor organizes lesson concepts in a way that builds on their logical connections to each other.							
C. Instructor makes it clear how the content of the lesson supports, and is connected to, future learning.							
D. Instructor ends the lesson by: <ul style="list-style-type: none"> • Reviewing lesson goals; and • Summarizing student learning with references to student work and discussion. 							

CORE ACTION 5. Students' levels of understanding are assessed throughout the lesson, and instruction is adjusted accordingly.		Thoroughly Evident 4	Mostly Evident 3	Somewhat Evident 2	Minimally Evident 1	No Evidence 0	N/A
A. Instructor consistently checks for student understanding, using informal yet deliberate methods (e.g., walks around the room to check on students' work, monitors verbal responses, assigns short problems).	Evidence Observed:						
B. Instructor consistently provides students with prompt, specific feedback to correct misunderstandings, reinforce learning, and help students revise their initial work.							
C. Instructor consistently provides strategic supports and scaffolds to students who need them (e.g., individualized or peer tutoring, re-teaching, review of basic skills).							
D. Instructor consistently provides extension activities for students who complete classwork early so they are not left idle or unchallenged.							
E. A vast majority of students evaluate and reflect on their own learning.							

Observation Procedures

1. Arrive early and stay in the classroom for the entire lesson to see the lesson's setup, flow, and conclusion.
2. Assume the role of researcher. You are collecting data on teaching practices, not evaluating teacher performance.
3. Come to lessons without the benefit of an advance meeting or detailed information about what to expect—just as students do.
4. Support the natural atmosphere of the classroom. This includes minimizing your interaction with students, such as asking questions or participating in activities. However, contact is allowed if done discreetly and with the purpose of understanding what students are thinking about and working on.
5. During whole-class discussion, if you cannot hear students working individually or in groups or need to see their work, walk around the room; otherwise, move to the side or back of the room.
6. Pay attention to students' responses, including how they are constructing their understanding, strategies they use to solve problems, and patterns of student error.
7. Pay attention to instructor-student interactions, including types of student engagement and how the instructor encourages engagement.
8. Pay attention to what the instructor says and does, as well as what he or she asks students to do.