FIGURE 7.1 • INSTRUCTIONAL LESSONS AND UNITS: DON'TS AND DOS TO REMEMBER

Instructional lesson and unit don'ts	Instructional lesson and unit dos
Don't think that if you taught it, it was learned.	Focus on evidence of student learning.
Stop mini lessons, which may be good for reading but are not successful in mathematics.	Build a coherent sequence of lessons.
Don't think that students must complete a set number of problems or an entire worksheet.	Focus on the quality of mathematics tasks and instruction, and the use of multiple strategies on the same problem, not on the quantity of problems.
Avoid teacher-centered instruction, such *as I do, we do, you do* (see Berry, 2018), or gradual release of responsibility (see McCaffrey, 2016).	Employ student-centered instruction that emphasizes *you* (students start thinking about the problem on their own), *y'all* (students share with a partner or at a table), and *we* (the class discusses the ideas and strategies that emerged) (Lampert, as cited in Green, 2014).
Don't require teachers to follow an exact script when teaching a lesson.	Adhere to your MWSA, and use curricular materials with consistency and fidelity
Eliminate inconsistent formats for lesson and unit plans across the team.	Develop a consistent format for lesson and unit plans across the team.
Don't focus on only one way to solve a problem to reach one right answer.	Focus on students using multiple solution paths and strategies, showing more than one way to approach a problem and in some cases identifying multiple correct solutions.
Don't focus only on correct answers.	Focus on explaining, justifying, and supporting reasoning.
Don't replace mathematical language and definitions with cute sayings, acronyms, and mnemonics.	Incorporate precise and agreed-on mathematical language and definitions into instructional units, and have students use this terminology.
Don't teach students tricks, shortcuts, and rules as a replacement for deep conceptual understanding or procedural fluency.	Develop students' procedural fluency built on the foundation of conceptual understanding and understanding the meaning of all procedures.
Avoid using only abstract symbols.	Use physical or concrete materials, semiconcrete representations, and abstract symbols to model mathematical ideas.
Don't sequence the representations so that students see only one at a time.	Use the CSA representations concurrently.
Don't use materials or illustrations without carefully assessing the affordances and the potential for misconceptions.	Select the representation that most accurately represents the mathematical idea.
Don't select disjointed resources from nonvetted outlets.	Use vetted, high-quality, and coherent instructional resources.
Avoid planning instruction in ways that privilege a few students and marginalize many.	Establish a commitment to high-quality and equitable instruction and to adopting all of NCTM's (2014a) eight mathematics teaching practices.

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Instructional lesson and unit don'ts	Instructional lesson and unit dos
Don't teach in ways that primarily focus on memorization, speed, and procedures, without understanding how the procedure works.	Embody a commitment to developing deep mathematical understanding of all operations and procedures.
Don't attempt to "water down" instruction or not teach on grade level as a way to help students.	Establish a commitment to teaching each and every student grade-level content, with the instructional support and differentiation they need to be successful.
Don't provide scaffolds for students that might diminish the cognitive demand of a task, referred to as "just-in-case" scaffolding (Dixon, 2018; Dixon et al., 2019).	Provide scaffolds for students that maintain the cognitive demand of a task, referred to as "just-in-time" scaffolding (Dixon, 2018; Dixon et al., 2019).
Avoid planning independently.	Engage in collaborative planning and team efforts.
Avoid staying deeply rooted in traditional teaching methods that are disconnected from what today's mathematically literate members of a democratic society need.	Plan lessons that are informed by reform-based and research-informed best practices in mathematics education to support students long beyond their PK–12 experience.
Don't jump straight to the algorithm without the underpinnings that provide understanding.	Introduce concepts before procedures, delaying algorithms.
Don't reveal that mathematics isn't your favorite subject or that you didn't do well in mathematics as a child.	Share a passion for mathematics.
Don't focus on how quickly a student can get an answer.	Allow adequate wait time.
Don't demonstrate how to use manipulatives and have students copy the presentation exactly.	Embed the use of manipulatives and concrete materials in students' problem-solving lessons.
Don't present tasks focused on algorithms or skill or broken into small parts.	Give tasks with higher cognitive demand using reversibility, flexibility, and generalization (Dougherty, 2001), as described in Chapter 6.