Planning Standards–Aligned Instruction Within a Multi-Tiered System of Supports

Computation of Fractions Example

College- and Career-Ready Standard Addressed

Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, $a/b + c/d = (ad + bc)/bd$.) (CCSS 5.NF.1)

Core Instruction

1. Implement a standards-aligned mathematics program that includes instruction in fractions and underlying skills.
2. Provide explicit instruction in replacing fractions with unlike denominators with equivalent fractions with like denominators so they can be added or subtracted.
3. Incorporate peer-mediated and independent practice opportunities to foster skill fluency, maintenance, and generalization.
4. Incorporate class-wide motivation strategies to promote engagement and on-task behavior, with individualized supports for students receiving supplemental intervention.
5. Periodically assess learning of all students in the class to determine the effectiveness of core instruction and identify students in need of additional supports.[1]

Secondary Intervention

1. Use companion evidence-based materials that align with the core program (if available) or an evidence-based intervention program that addresses fractions (e.g., Academy of Math).[2]
2. Provide explicit preteaching of core content as a supplement to core instruction.
3. Provide explicit instruction in and practice with underlying skills (e.g., adding and subtracting fractions with like denominators, and understanding fractions as numbers).
4. Provide small-group instruction with multiple response formats and explicit corrective feedback.
5. Incorporate additional small-group or individual behavior strategies targeted to individual needs in engagement and motivation.
6. Collect progress monitoring data at least one or two times per month using a valid and reliable tool that includes fraction computation.[3]

Intensive Intervention

1. Use progress monitoring and error analysis data to identify skill deficits and necessary adaptations to the secondary intervention.
2. Provide explicit instruction in foundational skills (broken into smaller steps), such as equivalent fractions, multiples, factors, mixed numbers, and number concepts.[4]
3. Prioritize standards and spend extended time providing explicit instruction in those areas.
4. Provide multiple and varied opportunities for learning and practice (e.g., using manipulatives) with explicit corrective feedback.
5. Incorporate additional behavior strategies targeted to individual needs in attention, self-regulation, learning or organizational skills, or social skills.
6. Collect progress monitoring data weekly, at a level sensitive to change, and adjust instruction as needed.[5]

Alternate Achievement Standards[6]

1. Provide instruction appropriate to a student's level of cognitive and symbolic functioning, using precise, simple language.
2. Provide explicit instruction in foundational skills that underlie the standard (e.g., number sense, basic fraction concepts, and basic facts).
3. Use additional individualized behavior and motivation strategies, with a focus on functional communication and independence.
4. Collect progress monitoring data on accuracy, fluency, and level of independence in completing tasks.
5. Incorporate assistive technology as needed to teach and assess skills.

1. For reviews of academic screening tools, see the Screening Tools Chart produced by the National Center on Response to Intervention (http://www.rti4success.org/resources/tools-charts/screening-tools-chart). Although mastery measurement may track progress in specific skills, such as fraction computation, using a general outcome measure, such as mathematics computation, will provide a broader assessment of generalized progress in the annual curriculum.

2. All noted programs are for illustrative purposes only; the National Center on Intensive Intervention (NCII) does not endorse products. For reviews of academic interventions, see the Academic Intervention Tools Chart produced by NCII (http://www.intensiveintervention.org/chart/instructional-intervention-tools).

3. Progress monitoring data will determine whether secondary intervention is sufficient or a student needs more intensive supports. For reviews of progress monitoring tools, see the Progress Monitoring General Outcome Measures Tools Chart produced by NCII (http://www.intensiveintervention.org/chart/progress-monitoring).

4. For more information on identifying relevant foundational skills to guide individualized intervention, see Powell, S. R., & Fuchs, L. S. (2013). Reaching the mountaintop: Addressing the Common Core Standards in Mathematics for students with mathematics difficulties. *Learning Disabilities Research and Practice, 28*(1), 28–37.

5. Frequent progress monitoring will allow for timely adaptations, as needed. Note that progress monitoring must occur at a student's instructional level to be sensitive to growth in skills.

6. For more information on these strategies, see Courtade-Little, G., & Browder, D. M. (2005). *Aligning IEPs to academic standards for students with moderate and severe disabilities.* Verona, WI: Attainment Company.