

General description/overview

Whole Number Foundations Level K™ is a Tier 2, small-group intervention designed to accelerate the mathematics achievement of kindergarten students who face difficulties developing proficiency with whole number concepts and skills.

- 50-lessons focused on whole number understanding
- Instructional objectives aligned with the [Common Core State Standards in Mathematics](#) (CCSS-M) for kindergarten
- Reviewed by the [National Center on Intensive Intervention](#) (NCII) as the program "ROOTS"

Product information

Whole Number Foundations Level K (WNF-K) is designed to accelerate the mathematics achievement of kindergarten students who are at risk for mathematics difficulties by focusing primarily on early number sense, numbers and operations, and vocabulary. The primary aim of *WNF-K* is to promote mastery of number concepts and skills through the number 20.

- Tier 2 small-group intervention provided *in addition* to core (Tier 1) mathematics instruction
- 50-lessons focused on whole number understanding
- Delivered in small-group formats, three to five times per week in 20 minutes per lesson
- Research suggests *WNF-K* has beneficial impact on student math achievement.
- The National Center on Intensive Intervention (NCII) rated a study about the effectiveness of *WNF-K* as having "partially convincing evidence" regarding the study design, and "convincing evidence" regarding participants, fidelity of implementation, and broad math outcome measures.
- Available in Spanish as [Fundamentos de los Números Enteros: Nivel K™](#)

Conceptual Framework

- *Conceptual Understanding* is developed through engagement with mathematical models, including number lines, "nifty fifty" chart, ten-frames, finger models, tally marks, and base-ten models.
- *Procedural Fluency and Automaticity* is developed through systematic practice and review within and across lessons, with frequent opportunities for students to respond. Checks for mastery at the end of each activity and Math Practice worksheets help teachers monitor students' mastery of concepts and skills.
- *Vocabulary and Discourse*
 - Key mathematical vocabulary is identified and explicitly taught and reviewed.
 - Scripted lessons ensure continuity and precise definitions.
 - Students are provided opportunities to use mathematical vocabulary to reason and provide justification.

Instructional Design Components

- *Explicit scripted lessons.* Lessons explicitly introduce important whole number concepts and skills concisely and consistently, emphasizing important math vocabulary. Lessons provide frequent opportunities for students to respond, and scripted guidelines allow teachers to address potential misconceptions and reinforce mathematical language and vocabulary.
- *Home-school connection.* Each lesson includes a "note home" which summarizes the lesson's concepts and skills, and provides suggestions to practice the math content at home.
- *Math Check Points.* Individually administered progress monitoring assessments that are administered every 5th lesson through lesson 25, and at lessons 34, 42, and 50.

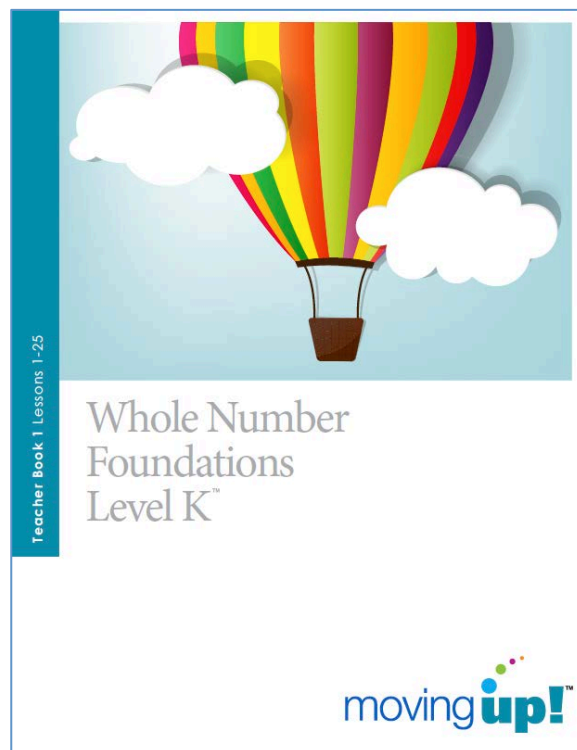
Materials

Formats consist of downloadable PDFs for self-printing according to a *Distribution License Agreement*, or as pre-printed materials that will be shipped to you.

Whole Number Foundations Level K includes 50 lessons divided into two Teacher Books, Math Practice worksheets, Program Support Materials, and a manipulative list.

- **Teacher Book 1:** Teacher's Guide and Lessons 1 – 25
- **Teacher Book 2:** Lessons 26 – 50
- **Math Practice worksheets:**
 - One Math Practice worksheet for each lesson
 - Math Check Point worksheets for assessing student progress after every 5th lesson through lesson 25, and at lessons 34, 42, and 50
 - Math Check Point data sheets for recording student progress
 - One set of worksheets required for each participating student
- **Program Support Materials:**
 - Number cards, place value mats, ten-frames, and a number chart
- **Manipulative list:** Manipulatives are required for implementation of the program and are NOT included. These manipulatives are commonly available in kindergarten classrooms, or may be purchased from educational retailers.

Whole Number Foundations Level K can be purchased together as an *Intervention Kit* which will accommodate one teacher and five students. Additional and/or replacement Teacher Books and Math Practice worksheets may also be purchased separately.



Research

Our Research to Your Classroom

Whole Number Foundations Level K (WNF-K) was developed and evaluated with funding from the U.S. Department of Education's Institute of Education Sciences (IES). An initial study of *WNF-K* involved nearly 300 at-risk students in 29 kindergarten classrooms from four Oregon school districts. At risk students were randomly assigned to the *WNF-K* intervention or a control condition (i.e., standard district mathematics instruction). In general, results suggested that *WNF-K* students made greater gains on important math outcomes than their peers in the control condition. Specifically, findings revealed small to medium effect sizes favoring *WNF-K* on the *Test of Early Mathematics Ability 3rd Edition* (Hedges' $g = 0.37, p = .037$) and *Early Numeracy-Curriculum Based Measurement* total score ($g = 0.30, p = .187$). Based on the What Works Clearinghouse standards (WWC, 2013), these results would describe *WNF-K* as having a "statistically significant positive effect" on student math outcomes. This initial study of *WNF-K* was also recently reviewed by the National Center on Intensive Intervention, which rated it as having "partially convincing evidence" regarding the study design, and "convincing evidence" regarding participants, fidelity of implementation, and broad math outcome measures.

Clarke, B., Doabler, C. T., Smolkowski, K., Baker, S. K., Fien, H., & Strand Cary, M. (2014). Examining the efficacy of a tier 2 kindergarten mathematics intervention. *Journal of Learning Disabilities*, Advanced online publication. doi: 10.1177/0022219414538514

Pricing

Formats consist of downloadable PDFs for self-printing in accordance with a *Distribution License Agreement* along with printing guidelines, or as pre-printed materials that will be delivered to you.* See <https://dibels.uoregon.edu/market/movingup/kfoundation> for specific ordering information.

<u>Item</u>	<u>Ordering recommendations</u>	<u>Price for PDF license to print</u>	<u>Price for pre-printed materials</u>
Intervention Kit. Includes Teacher Book 1 and Teacher Book 2; Math Practice worksheets (one worksheet per lesson and three additional Math Check Points. 5 copies); Program Support Materials; manipulative list**	Order at least one complete kit per school.	\$250	\$399
Teacher Book 1. Includes Teacher's Guide and Lessons 1 – 25	May be ordered in addition to the Intervention Kit for an additional interventionist, or as a replacement.	\$125	na
Teacher Book 2. Includes Lessons 26 – 50		\$125	na
Math Practice worksheets: For Lessons 1 – 50	Each student in the intervention will need a copy of the Math Practice worksheets. Order one per students.	\$10 (license to print 1 copy)	\$102 (set of 5 copies)

*Prices for PDF delivery are for a license to print one copy, unless otherwise specified, and do not include cost of printing. Prices for pre-printed materials include shipping anywhere in the contiguous United States.

**Manipulatives are not included.