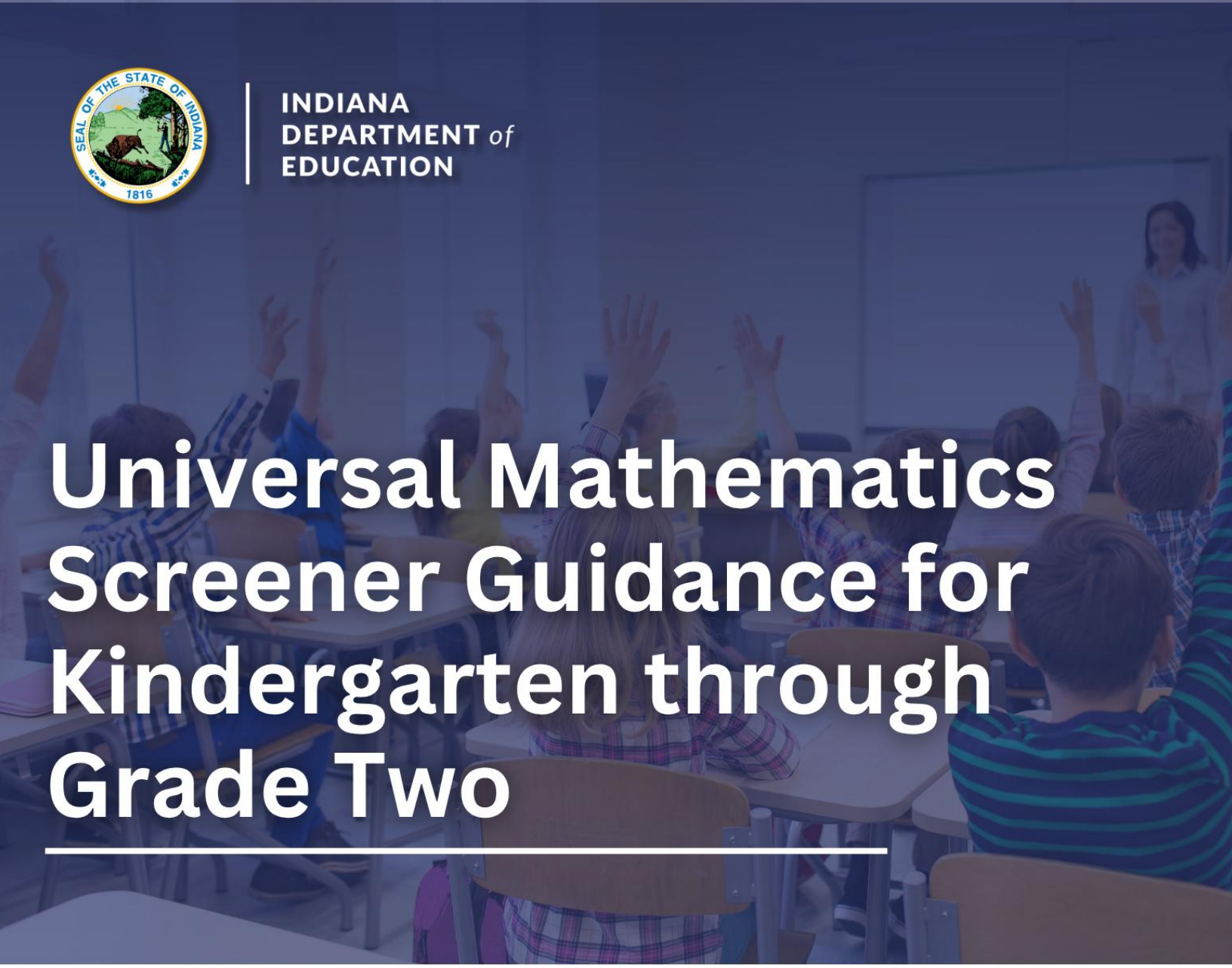
INDIANA DEPARTMENT of EDUCATION



Universal Mathematics Screener Guidance for Kindergarten through Grade Two

Indiana Department of Education

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Chapter 1: From Screening to Support: Implementing Indiana's K–2 Mathematics Screeners to Identify and Support Students At Risk

Purpose of this Guidance Document and Legislation

This guidance document supports Indiana public school corporations, charter schools, and accredited non-public schools (including Choice scholarship schools) in implementing department-approved universal mathematics screeners for kindergarten through grade two, as required by Indiana Code (IC) 20-32-6.5-2. This document explains how to use universal mathematics screener data to determine risk status and outlines required interventions in alignment with Indiana Code (IC 20-32-6.5-3 and IC 20-32-6.5-4).

Evaluation Requirement (Grades K-2)

Beginning in the 2026–2027 school year, all students in kindergarten through grade two must be evaluated for risk of not meeting grade-level proficiency in mathematics using data from a department-approved universal mathematics screener (IC 20-32-6.5-3).

Determining "At Risk" & Required Response

Students identified as at risk, based on universal mathematics screener results, must receive mathematics intervention as outlined in IC 20-32-6.5-3. Early identification enables schools to provide targeted, timely support to address learning gaps and promote student success. Additional guidance on triangulating screener data with other evidence to inform instructional decisions is provided in Chapter 3.

Indiana's Tiered System of Supports for Mathematics

Per IC 20-32-6.5-3, mathematics intervention must be delivered through a multi-tiered system of supports that:

- Aligns with daily Tier I instruction and standard-level learning progressions.
- Is targeted, differentiated, and supplemental to Tier I instruction.
- Uses evidence-based instructional strategies that build conceptual understanding, procedural fluency, and real-world problem solving.
- Ensures students regularly engage with rigorous grade-level content, show progress, and demonstrate understanding.
- Relies on continual assessment and in-depth analysis of student data to guide flexible movement into and out of Tier II and Tier III supports.

The Indiana Department of Education (IDOE) provides additional guidance for implementing this required framework in the Indiana Tiered System of Supports for Mathematics Toolkit Courses.

Daily Mathematics Instruction Requirements (Grades K–5)

For schools serving kindergarten through grade five, IC 20-32-6.5-4 requires:

- A minimum of 60 minutes of daily Tier I mathematics instruction; **and**
- A minimum of 20 minutes of daily mathematics intervention for students who are identified as at risk.

Note: While the evaluation and intervention requirements apply to grades K–8, the daily time requirements above apply specifically to K–5.

Purpose of a Universal Mathematics Screener

A universal screener is a systematic assessment tool administered to all students to evaluate their understanding of skills and concepts and to identify those who may need additional support or intervention. In mathematics, screeners are typically brief, standardized assessments that focus on foundational early numeracy skills and concepts, including number sense, counting, computation, and early problem-solving skills (Fuchs & Fuchs, 2006). Universal screeners help educators identify potential areas of difficulty early, allowing them to assess whether students are progressing at the expected rate or if they require additional support through targeted interventions to address learning gaps (National Center on Response to Intervention, 2010).

Early intervention is critical in preventing future difficulties in mathematics learning, as research indicates that students who do not receive early support are at greater risk for long-term academic struggles (Duncan et al., 2007; Morgan et al., 2009). These students may fall behind their peers, resulting in widening knowledge gaps that can impact their self-esteem, motivation, and future academic opportunities (Gersten et al., 2012; Lembke & Foegen, 2009). Without early identification and support, there is a risk of misallocating educational resources in which some students may receive assistance that does not meet their actual needs while others, who require unnoticed assistance, remain (Assel et al., 2020; Clarke et al., 2023).

Using universal screener data correctly is crucial for accurately identifying students' strengths and areas of need. Screener data provides a general overview of students' understanding, indicating whether students are at, above, or below expected levels in essential numeracy skills or benchmarks. When interpreted and used properly, the data provides teachers with valuable insights to make informed decisions about the intensity of instruction. Accurate use of the data promotes equitable educational outcomes and addresses learning gaps early.

Although universal mathematics screeners serve as effective tools for identifying students who may benefit from additional support in numeracy, they do have limitations. Universal mathematics screeners do not provide formal diagnoses of learning disabilities, such as dyscalculia, nor do they offer comprehensive assessments of students' cognitive profiles or the underlying factors contributing to mathematical challenges. Rather, mathematics screeners function as preliminary indicators, highlighting students who may require further intervention, enrichment, or acceleration.

IDOE Approved Universal Mathematics Screeners

Schools must choose one of the two approved universal mathematics screeners for kindergarten through grade two.

Table 1: Approved Screeners

Vendor	Screener
Curriculum Associates	i-Ready Inform
Forefront Education	Universal Screeners for Number Sense (USNS)

Both universal mathematics screeners, i-Ready Inform and USNS, are intentionally designed to be administered three times per year, which reflects best practice for monitoring student progress.

Chapter 2: Features of Each Screener

i-Ready Inform - Curriculum Associates

i-Ready Inform is one of two Indiana State Board of Education (SBOE) approved universal mathematics screeners for students in grades kindergarten through two. Aligned to the 2023 Indiana Academic Standards for Mathematics, it is an online, group-administered assessment designed to give educators year-round insights into student performance. By measuring foundational numeracy skills across key domains, including Number and Operations, Algebraic Thinking, Measurement and Data, and Geometry, the screener helps schools identify students who may be at risk of not meeting grade-level expectations. Students participate three times each year (fall, winter, and spring), allowing teachers to monitor learning across the year and make timely instructional decisions. Results are reported at the district, school, class, and student levels, providing accessible and actionable information for educators and families.

For students identified as at risk, i-Ready Inform provides optional i-Ready Mathematics Interview Tools, which offer one-on-one, paper-based assessments that allow educators to explore early math skills in greater depth. i-Ready includes a reporting suite that provides educators and families with information to aid targeted interventions that supplement Tier I instruction.

Universal Screeners for Number Sense (USNS) - Forefront Education

Universal Screeners for Number Sense (USNS), the second of the two SBOE-approved universal mathematics screeners for grades kindergarten through two, are developmentally appropriate, aligned to the 2023 Indiana Academic Standards, and provide an interview-based mathematics screener approach to assess foundational numeracy skills. This screener centers on early number sense competencies, which research shows are strong predictors of later mathematics achievement. Administered three times per year, USNS provides a structured sequence of assessments: fully interview-based tasks in the fall, followed by combined interview and written components in the midyear and spring administrations. Interviews consist of short, individualized interactions, and written sections may be administered to small groups or entire classes, providing a comprehensive view of student understanding.

The USNS system is supported by the Forefront Education platform, which provides tools for data collection, scoring, and instructional follow-up. Results are reported at the district, school, class, and student levels. Educators have access to rubrics, interview scripts, scoring guidance, and visual supports through the USNS Assessment Manual specific to Indiana. Forefront’s digital tools help schools identify students needing Tier II or Tier III intervention, monitor progress, and communicate results to families through personalized, bilingual reports and instructional activities.

Chapter 3: Triangulating Mathematics Data to Guide Instructional Decisions for All Students

Introduction

A systematic process for collecting, analyzing, and interpreting data is essential for a successful tiered support system. Traditionally, identification of students needing additional support has focused on standardized test scores and the 80-15-5 model (assuming 80% of students succeed with core instruction alone, 15% need targeted support, and 5% need intensive intervention), with classroom performance and other assessments playing a smaller role. Misunderstanding the root causes of student challenges, misaligning school services and applying ineffective instructional strategies are all consequences of inflexible, data-driven decisions.

A data-decision framework has been created to support more purposeful and adaptable identification of students at risk. This framework uses a three-guidepost data-triangulation approach and locally determined supplemental factors to help schools identify students in grades three through eight who may need tiered math intervention. This framework can also be used to identify students who meet or exceed grade-level expectations, allowing schools to provide appropriate enrichment or acceleration. By applying the three-guidepost data triangulation process, educators can review data from multiple sources, including classroom assessments and student performance, to accurately determine if students are meeting, exceeding, or falling short of grade-level standards, and recognize trends within the grade level.

Overview

Triangulation of data from multiple sources is essential for accurately determining which students are at risk of not achieving grade-level proficiency by the end of the school year. These students may lack foundational numeracy skills, which include the critical early components necessary for later mathematical proficiency. These skills heavily emphasize early number sense (magnitude, cardinality, and composing/decomposing numbers) as the foundational prerequisite for all applied arithmetic and problem-solving. The triangulation process relies on collaborative conversations and a consistent evaluation protocol for all students. By evaluating each learner from three distinct perspectives within each guidepost, educators gain a holistic view of student needs and can provide appropriately targeted instruction and/or intervention.

Understanding Guideposts

A guidepost serves as a reference point for beginning conversations and examining a student's individual strengths and needs, helping educators incorporate data from multiple sources into their decision-making through a consistent method for understanding academic needs. It is not intended to be a rigid rule, nor should it rely solely on limited norm-referenced data. A guidepost is not meant to narrow the data considered; rather, it supports drawing from multiple sources to develop a fuller, more accurate understanding of a student's needs and make evidence-based, consistent decisions about how to support students. Core non-negotiables of the process

include ensuring that collaborative conversations remain central, that all students complete required screenings, and that once the process is established, it is applied consistently across all students in kindergarten through grade eight.

The Three Guideposts of Data Triangulation

Triangulation of data uses three key guideposts to build a comprehensive picture of student needs. Each guidepost serves a specific purpose and includes actions that support accurate and well-rounded evaluation. The three guideposts are Universal Mathematics Screeners, Classroom-Based Assessments, and Mathematics Tasks & Observations.

1. Universal Mathematics Screener Data - Baseline or First Guidepost

The universal mathematics screener data acts as a **"first alert"**, indicating whether a student **meets, exceeds, or falls below grade-level expectations**. Data from the locally adopted Kindergarten - Grade 2 universal mathematics screener (Forefront Education's Universal Screeners for Number Sense (USNS) or Curriculum Associates' i-Ready Inform) are utilized to provide this baseline assessment. *(See vendor guidance for more information about how to analyze screener data for their product.)*

For guidance on screener administration and interpretation for English Learners, students with significant intellectual disabilities, or high ability students, see Chapter 4 of this document.

- (USNS) Consult criterion-referenced data such as question-level or standard-level data: examine skill or concept-specific results from the screener to pinpoint areas of significant need.
- (i-Ready Inform) Consult domain-specific (criterion-referenced) data: identify exact skills and concepts for targeted support and intervention.
- IDOE has set the benchmark for identifying students potentially at risk of not meeting grade-level proficiency at the 40th National Percentile (NP).

2. Classroom-Based Assessments - Second Guidepost

Classroom-based assessments are tools that give **numerical scores** to help teachers spot **patterns in learning, identify gaps, and understand how students are progressing**. These assessments are structured and consistent, therefore, the results can be compared over time or measured against grade-level expectations. They help confirm what we see in screening tools by showing how students perform during everyday classroom tasks. Examples of this type of assessment include:

- Curriculum-Based Measurement (CBM) assessments (basic facts, computation, concepts & applications)
- Math fact fluency checks (does not include timed math facts test)
- Topic/unit tests with numerical scores (aligned to Indiana State Standards)
- Quick checks or exit ticket mastery percentages
- Online program metrics (accuracy percentage, lessons passed)
- Standard-based gradebook data over time

3. Mathematics Tasks & Observations - Third Guidepost

The third guidepost focuses on **real-world math tasks** that let students show ***how*** **they think, reason, and solve problems in meaningful situations**. Along with these tasks, teachers' observations of students' **strategies, behaviors, and conversations** provide essential insight into how students apply math in ways that matter beyond the test. These sources provide insight into students' understanding that numerical scores alone cannot capture. Examples of this type of assessment include:

Performance Tasks (Real-World Math)

- Multi-step word problem tasks with rubrics
- Measurement activities (e.g., estimating and checking length)
- Data collection and graphing activities
- Geometry tasks using pattern blocks or manipulatives

Math Reasoning Artifacts

- Math journals (students explain their thinking)
- Whiteboard or scratch-paper evidence during small groups
- Strategy explanation tasks ("Show two ways to solve it")
- Error analysis activities

Teacher Observation & Anecdotal Notes

- Use of manipulatives (Do they choose appropriate tools?)
- Noticing misconceptions (e.g., place value misunderstandings, skip-counting errors)
- Perseverance and strategy flexibility
- Verbal reasoning during turn-and-talks or math discussions

Student Work Samples / Portfolios

- Samples from intervention cycles (before/after)
- Problem-solving tasks where students model thinking with drawings or equations
- Tasks assessing major clusters (e.g., fraction models, place value, multi-step reasoning)

Student Conferences & Think-Alouds

- Students explaining how they solved a problem
- Teachers probing misconceptions ("Why did you choose that strategy?")

Supplemental Factors

Supplemental factors may impact a student's academic performance and placement in a tiered intervention system. These factors should be determined at the corporation and/or school level and reflect the specific needs of the population served. This approach may provide additional flexibility to target students' specific needs.

- Attendance during math block
- Participation rates in small math groups
- Opportunity to learn and depth of standards taught
- Test irregularities (e.g., rushing through assessment)

- Staff and resource capacity: assess the available support and resources when planning interventions.
- Instructional priorities: identify instructional priorities to inform intervention priorities and ensure comprehensive support for each student.

Table 2. Three Guideposts Data Sources

Guidepost	Purpose	Data Sources	Considerations and Insights
Guidepost 1 - Universal Screener Data	First alert: identify students that may be "at-risk" for not meeting grade-level expectations	Corporation-adopted K-2 universal mathematics screener	● 40th National Percentile ● Criterion-referenced data ● Question-level, skill levels, domain-specific, standard-level
Guidepost 2 - Classroom-Based Assessments	● Numerical, score-based classroom assessments ● Contextualize screener score	**Examples** ● CBM assessments ● Math fact fluency ● Unit/topic tests ● Quick checks ● Exit tickets	● Standard-level data ● Reflects depth of standards mastered
Guidepost 3 - Mathematics Tasks & Observations	● Insight into student thinking and how they apply math ● Identify misconceptions	**Examples** ● Performance tasks ● Math journals ● Teacher observations ● Student work samples ● Think alouds	● Insight into student thinking and applying math concepts and skills ● Numeracy skills ● Alignment to Math Process Standards

Process for Applying Math Data Triangulation

Student Data Information

For all students with an overall score that falls at or below the 40th National Percentile (NP) on each of the three screener administrations, apply the mathematics data triangulation process using the Individual Mathematics Plan Template. *(*Note: Collaborative teams may need to identify specific domains or standards they want to target prior to initiating this process, especially at the first administration. Early number sense and/or computation standards should be prioritized.)*

Step 1. Gather and Analyze Required Data Sources

- **Guidepost 1 - Universal Math Screener**
  - **Required**: Screener data from USNS or i-Ready Inform for all students at or below the 40th Percentile.
  - Example Data:
    - USNS: Question/standard level, skills and concepts data
    - i-Ready Inform: Domain/standard specific, skills and concepts data

  Document screener data for each student at or below the 40th National Percentile on an Individual Mathematics Plan template. Review screener data:

  - Which domains, standards, or items revealed specific areas of concern?
  - What patterns are visible across the data (e.g., concept specific needs in number sense)?
  - What initial instructional priorities does this suggest for a 3–4-week intervention cycle?

  Outcome: Identify and document the student's target areas of need based solely on the screener data. Determine the student's targeted areas by domain, standard, PLD (Proficiency Level Descriptor), or skill.

  Resources: Vendor guidance: i-Ready Inform or Forefront's USNS

- **Guidepost 2 - Classroom-Based Assessments**
  - Example Data Sources: CBM assessments (computation, concepts, and applications), fact fluency (non-timed), unit/topic tests, quick checks, exit tickets, online platform accuracy % or lessons passed, and/or standards-based gradebook patterns.

  Compare the determination of needs from the screener data review above with classroom data aligned to the student's targeted area(s) of need.
  - Do CBM scores, unit tests, or exit tickets show similar concerns?
  - Are scores consistent with screener findings?

- Does gradebook evidence show a trend over time?

Outcome: Confirm or revise the student's targeted areas of need. Do the classroom-based assessments confirm the same needs as the screener data? Are there areas where the classroom-based assessments contradict the screener data?

- **Guidepost 3 - Mathematics Tasks & Observations**
  - Example evidence: performance tasks, real world problem solving, math journals, small group whiteboard evidence, thinking strategies, manipulatives use, student conferences & think alouds, error analysis, portfolios, etc.

Examine evidence of student thinking aligned to the student's targeted area(s) of need:

- What mathematical strategies does the student choose?
- What misconceptions surface during real world problem solving?
- What do journals, whiteboards, or observations show about conceptual understanding, number sense, procedural fluency, or application?
- Do think alouds reveal gaps that are not visible in numerical scores?

Outcome: Finalize student's targeted areas of need based on the guideposts.

- **Supplemental Factors (determined at the local level)**
  - Examples:
    - Attendance during math block
    - Participation in small group instruction
    - Opportunity to learn
    - Test irregularities
    - Staff/resource capacity
    - Instructional priorities

Consider any supplemental factors that may impact a student's academic performance and placement in a tiered intervention system.

- Has the student had sufficient opportunity to learn the content to the full depth and breadth required by the standard, PLD, or skill being assessed?
- Were there any irregularities in the testing environment, timing, or administration of the screener?
- What locally determined supplemental factors should be taken into consideration?

Outcome: Document supplemental factors that should be taken into consideration when evaluating the student's targeted needs and intervention placement.

Determination of Targeted Instructional Needs

After guidepost data is collected, educator teams convene to review and analyze student data and identify students who may be at risk for not meeting grade-level proficiency. These collaborative discussions may occur during PLCs or other scheduled meetings. Participants should include the teacher of record and may also involve grade-level team members, special services staff, instructional or math coaches, administrators, and interventionists. Teams should be established at the beginning of the year and remain consistent throughout.

Step 2. Synthesize the Three Guideposts and Supplemental Factors

Educator teams hold collaborative conversations to determine intervention needs.

- Seek areas of agreement: Where do all three data types show similar results?
- Spot inconsistencies: Which findings are at odds with each other, and what might explain those differences?
- Determine whether concerns center on:
    - Conceptual understanding
    - Number sense
    - Procedural fluency
    - Vocabulary
    - Application
- Consider supplemental factors that may explain discrepancies.
- Identify areas of misalignment between screener data and Guidepost 2 and Guidepost 3. Are there students that do not require intervention based on the collected evidence?

Outcome: A shared, accurate identification of students at risk of not meeting grade-level proficiency as well as students that may not require additional support through intervention services.

Resources:

- Indiana Tiered System of Supports Toolkit for Mathematics
    - Chapter 2, Section 2: Collaborative Conversations
    - Chapter 6, Section 2: Data Decision Rules
    - Structured Reflective Conversation Outline and Planning Tool

Step 3. Determine How to Address Targeted Instructional Needs

After all student data has been reviewed and students at risk for not meeting grade-level proficiency have been identified, the team determines how to best meet the targeted needs of the identified students. For a description of Tier I, Tier II, and Tier III supports, see Chapter 4 of this document.

- **If a student's targeted needs can be met in Tier I or the final determination indicates that more than approximately 20% of students require Tier II intervention,**

- Apply Tier I intensification strategies such as:
  - Just-in-time scaffolding
  - Small group targeted support
  - Daily fluency or number sense routines
  - Tier I short-term classwide interventions
- Ensure alignment with content standards (Indiana Academic Standards) and Indiana's Mathematics Process Standards using the Instructional Frameworks and the Grades K-2 Proficiency Level Descriptors on the Indiana Assessment Framework.
- Refer to IDOE's Tier I Intensification Strategies document for additional information.

If Tier II or Tier III intervention is required:

- Identify targeted standards, PLDs, concepts, and/or skills that will be the focus of the upcoming intervention cycle. (3–4-week cycle).
- Consider staff and resource capacity.
- Plan intervention groups, size, frequency, staffing, content/activities, and other components that are required to meet the needs of Tier II and Tier III students.

Resources:

- Indiana Tiered System of Supports for Toolkits for Mathematics
  - Chapter 5: Tiered Instruction
  - Chapter 6, Section 2: Data Decision Rules
  - Data Decision Rules Handout

Step 4. Document the Decision & Plan

For all students at or below the 40th National Percentile (NP), document the following using the Individual Mathematics Plan Template.

Include:

- Student Information
- Choose "Yes" or "No" for the question, "Does [insert student name] need an Individual Mathematics Plan?" on the Individual Mathematics Plan.
- Data from each of the three guideposts
- Supplemental factors considered
- Identified standard, PLD, concept, and/or skill priorities
- Chosen intensification/intervention plan
- Progress monitoring plan aligned to the targeted needs

If it is determined that no intervention is required:

- Clearly document data for all three guideposts and any supplemental factors that lead to the decision.

- Choose “No” for the question, “Does [insert student name] need an Individual Mathematics Plan?” on the Individual Mathematics Plan.
- Record the decision and rationale in the Parent Communication Log.

Step 5. Monitor Progress & Re-Triangulate

During the 3-4 week intervention cycle:

- Collect new classroom-based assessment data and mathematics tasks and observation evidence.
- Check alignment with initial screener findings.
- Reflect as a collaborative team:
  - Has the student responded?
  - Do data sources show increased areas of alignment?
  - Does the plan need adjustments?

Resources:

- Indiana Tiered System of Supports for Toolkits for Mathematics
  - Chapter 3: Progress Monitoring/Formative Assessment
  - Chapter 5, Sections 3, 4, and 5: Tiered Instruction

Student Examples of Data Triangulation Process

Example 1: Kindergarten Student — “Maya”

A student whose early number sense concerns appear consistently across all guideposts.

Step 1. Gather Data from All Three Guideposts	
Guidepost Data	
Guidepost 1: Universal Screener (USNS K)	• Percentile: 18th NP (below ~40th NP benchmark). • Standard-level data: Difficulty with counting and cardinality, understanding quantities, and comparing numbers. • Item-level data: Incorrect responses on tasks requiring one-to-one correspondence and identifying “how many” after counting.
Guidepost 2: Classroom-Based Assessments	• Counting assessment: Counts to 12 independently, inconsistently past 15. Quick checks: • Quantity recognition 0–10: 6/10 correct. • Subitizing (dot card fluency): Low accuracy. Unit task: • Matching numerals to quantities (0–10): 50%.

Guidepost 3: Mathematics Tasks & Observations	Teacher observation: Loses track when counting manipulatives and often double-counts. Whiteboard evidence: Drawings do not match quantities represented. Manipulatives use: Does not organize items into lines or groups independently. Think-aloud: When asked “How did you know there were 7?” Maya guesses without recounting or explaining strategy.
Supplemental Factors	Attends consistently. Opportunities to learn: Full access to core instruction.
Determination of Targeted Instructional Needs	
Step 2. Synthesize the Three Guideposts & Supplemental Factors	All three guideposts converge on the same root cause: Gaps in early number sense (K.CA and K.NS skills).
Step 3. Determine How to Address Targeted Instructional Needs	Tier I Intensification + Strategic Early Numeracy Intervention ● Daily subitizing routines (dot cards, ten-frames). ● Structured counting collections. ● Focused small groups supporting cardinality and quantity comparison.
Step 4. Document the Decision & Plan	● Target skills: Cardinality, subitizing, matching quantities to numerals. ● Progress monitoring: Weekly quick checks and observational rubrics.
Step 5. Monitor Progress & Re-Triangulate	Collect new counting and quantity-recognition samples over the next 3–4 weeks and revisit all guideposts to determine growth and next steps.

Example 2: Second Grade Student — “Leo”

A student whose screener score appears low, but classroom and authentic data show he is functioning at grade level.

Step 1. Gather Data from All Three Guideposts
Guidepost Data

Guidepost 1: Universal Screener (i-Ready Inform)	● Percentile: 34th NP (slightly below benchmark) ● Domains flagged red (areas of concern): Numbers and Operations, Computation and Algebraic Thinking ● Several items skipped or answered quickly.
Guidepost 2: Classroom-Based Assessments	● Unit test (place value to 100): 94% ● Exit ticket accuracy over two weeks: Average 3/4 correct on addition and subtraction problems. ● CBM concepts & applications: On grade level.
Guidepost 3: Mathematics Tasks & Observations	● Whiteboard evidence: Uses base-ten drawings accurately. ● Math journal: Explains thinking clearly and uses equations to match models. ● Manipulatives: Chooses tens and ones appropriately; shows a strong sense of magnitude. ● Think-aloud: Explains regrouping strategies coherently.
Supplemental Factors	Screener was taken after a long weekend; the teacher noted Leo rushed.
Step 2. Synthesize the Three Guideposts & Supplemental Factors	● Guideposts 2 and 3 converge on grade-level mastery. ● Guidepost 1 is the outlier; contextual factor (rushing) explains the mismatch.
Step 3. Determine How to Address Targeted Instructional Needs	● No intervention required. ● Continue with strong Tier I instruction. ● Provide enrichment (multi-step problems, open response tasks).
Step 4. Document the Decision & Plan	Note discrepancy and contextual factors. Continue monitoring via exit tickets and journals.
Step 5. Monitor Progress & Re-Triangulate	Continue to collect classroom-based assessment data and mathematics tasks and observations evidence in a 3–4-week cycle to verify alignment.

Chapter 4: Characteristics of a Tiered System of Supports in Mathematics

Indiana's Tiered System of Supports for Mathematics

Tier I - Core Instruction

Tier I establishes the core mathematics experience for all students, delivering rigorous, standards-aligned content. It prioritizes the development of mathematical proficiency and conceptual understanding through engaging tasks, purposeful questioning, and meaningful classroom discourse.

- All learners engage in grade-level lessons built around cognitively demanding problems.
- Teachers employ research-based practices: clear objectives, scaffolds, and formative checks.
- High-quality instructional materials and IDOE resources, such as instructional and assessment frameworks, are applied to ensure standards alignment.
- Student interaction, collaboration, and opportunities to utilize and connect multiple representations are emphasized.

Tier I Intensification

Tier I intensification strengthens core math instruction when large portions of students need support, allowing educators to address widespread skill gaps without relying on extensive pull-out interventions. By fortifying whole-class instruction through targeted, efficient practices, schools can reduce the number of students requiring additional intervention and restore a manageable level of targeted support. This approach focuses on improving instructional delivery, increasing responsiveness to student needs, and ensuring all learners access strong, grade-level mathematics instruction. Key elements and strategies include:

- Implement brief, structured whole-class interventions (10–15 minutes) to reteach missing prerequisite skills before using small-group pull-outs.
- Increase opportunities to respond and gather quick formative data using tools such as whiteboards, exit tickets, response cards, or choral responses to guide real-time adjustments.
- Strengthen instructional routines through evidence-based practices, scaffolded assignments, strategic pairing or rotations, and the concrete–representational–abstract progression when appropriate.
- Incorporate daily fluency or number-sense routines to reinforce foundational skills and improve overall class-wide mastery.
- See IDOE's Tier I Intensification Strategies for additional information.

Tier II - Targeted Intervention

Tier II provides supplemental, small-group support for students not meeting Tier I benchmarks based on the three-guidepost data triangulation process, outlined in Chapter 3. Focused

interventions address specific skill gaps while maintaining alignment with grade-level standards using assessment data and intervention strategies connected to prior knowledge and learning progressions of concepts and skills.

- Groups of three to five students receive intentional, targeted instruction in addition to Tier I instruction.
- Highly qualified instructors trained in students' needs provide small group instruction.
- Use of scaffolds and re-teaching accelerates learning to close learning gaps.
- Progress monitoring every two to four weeks informs instructional tweaks.
- Flexible regrouping based on evolving data keeps students on track.

Tier III - Intensive Intervention

Tier III delivers individualized, high-dosage instruction for students with significant, persistent gaps, expanding the use of the frameworks beyond one or more grade levels. This level emphasizes frequency and structure to build foundational skills before transitioning back to less intensive tiers.

- One-to-one or very small groups targeting prerequisite concepts.
- Often implemented by an intervention specialist or special education educator.
- Frequent sessions (weekly or more) with heightened scaffolding.
- Deep diagnostic insight drives lesson planning and pacing.
- The goal is to rapidly close gaps and return students to Tier I or Tier II.

Tiered Enrichment Supports for High Ability Students

Tier I - Core Instruction

High ability students should continue to participate fully in Tier I instruction with enrichment provided through:

- Cognitively demanding tasks that extend beyond foundational numeracy skills and encourage flexible, abstract reasoning.
- Open-ended problem-solving, allowing students to explore multiple strategies and representations.

Tier II - Targeted Enrichment

For high ability students demonstrating mastery of grade-level content, Tier II focuses on targeted enrichment rather than remediation. Instruction at this level may include:

- Small-group enrichment (three to five students) deepens conceptual understanding through extension tasks, mathematical investigations, or problem-based exploration.
- Instruction connected to learning progressions, allowing students to move in above-grade level concepts when ready.
- Opportunities for structured acceleration, such as early exposure to multi-step reasoning, algebraic thinking, or early number theory.
- Progress monitoring focused on growth in advanced reasoning.

Tier III - Intensive Enrichment

For students with exceptionally advanced mathematical ability, Tier III may provide individualized, high-intensity enrichment that includes:

- One-to-one or very small group advanced instruction, such as early algebra readiness, advanced problem-solving structures, or non-routine challenge problems.
- Use of diagnostic tools to identify readiness for accelerated pathways and opportunities for acceleration and/or compacted lessons and courses.
- Frequent, structured sessions focused on deepening conceptual relationships beyond the grade-level curriculum.
- Coordination with high ability programming to ensure continuity across grades to maximize long-term growth.

Considerations for Special Populations

Students with Significant Intellectual Disabilities

In some cases, a student with a significant intellectual disability may be unable to complete the universal mathematics screener, even with accommodations, communication supports, and multiple attempts. If the student cannot access the screener after attempting five items and a No Mode of Communication (NMC) is documented, the student should stop. The absence of screener data does not prevent the instructional team from determining skill needs or selecting interventions. Instead, the team must rely on the other guideposts within the triangulation framework. Further information about using data triangulation to guide instructional decisions is provided in Chapter 3 of this document.

When the screener does not yield usable information for a student, the first guidepost becomes unavailable. The team simply acknowledges that the first alert of a student requiring additional support and intervention, typically provided through the screener, is missing due to the student's communication profile or inability to engage with the testing format. Instructional teams must still provide mathematics interventions and Specially Designed Instruction (SDI) aligned with the student's unique needs. Triangulation using guideposts two and three ensures that teams can:

- Identify the mathematical concept(s) requiring additional instruction
- Design SDI that adapts content, methodology, or delivery of necessary interventions
- Select accessible instructional materials and communication supports
- Monitor progress using observable, documented behaviors

This approach ensures that every student receives meaningful, data-informed mathematics instruction, even when the mathematics screener data cannot be used.

English Learners

Students with very limited English proficiency (i.e., newcomers and learners at WIDA Levels 1-2) require careful consideration when interpreting mathematics screener data. Students who have screener data indicating performance below grade-level expectations may be demonstrating difficulty with the linguistic demands of the assessment rather than a true

difficulty with mathematical concepts. Both i-Ready Inform and USNS are available in Spanish, and this should be carefully considered when planning for test administration.

When reviewing results, teams should incorporate additional forms of evidence, included as supplemental factors, such as student performance on classroom-based assessments in their home language, observational data collected during instruction, and opportunities for students to explain their thinking using their home language on authentic math assessments. Nonlinguistic problem-solving strategies, such as using visuals, manipulatives, modeling, or gestures, can provide more accurate insight into students' mathematical understanding. If the screener is digital, teams should also recognize that some newcomers may have limited familiarity with technology, which can further impact results. In this case, additional accommodations may be needed to ensure the student can access the screener to the full extent possible.

English learners should receive appropriate accommodations as permitted by each assessment, including language supports specifically designed for English learners. These supports help ensure that assessment outcomes validly reflect mathematical skills instead of language proficiency. When planning instruction and intervention, educators should provide mathematics interventions aligned to each student's demonstrated skill needs while simultaneously integrating appropriate language supports. To ensure accurate interpretation of assessment information and appropriate instructional responses, collaboration between EL specialists, mathematics educators, and interventionists is essential. This collaborative approach ensures that decisions account for both students' mathematical strengths and the linguistic demands that may influence their performance.

High Ability Students

High ability students are those who consistently demonstrate advanced mathematical thinking, rapid acquisition of concepts, or performance significantly above grade level expectations and require thoughtful consideration when administering and interpreting universal mathematics screeners. Because the screeners are designed to focus on foundational numeracy skills, they do not assess the full depth and breadth of advanced mathematical reasoning. As a result, screener data alone may not fully capture a high ability student's mathematical strength.

During administration, high ability students may reach upper limits of what early numeracy screeners are designed to measure. For these students:

- Items may feel overly simple or repetitive, occasionally resulting in rushed responses.
- Students may hit a "ceiling" on the assessment because foundational skills have already been mastered, not because mathematical thinking is limited.
- Quick completion time may reflect strong automaticity rather than disengagement.

Educators should ensure these patterns are recognized as indicators of potential advanced understanding rather than misinterpreted as irregularities.

To reduce unnecessary testing and ensure students engage in assessments that appropriately match their instructional needs, students in kindergarten or grade two (required high ability testing grades) who score at or above the 80th percentile on the first two administrations of the

universal mathematics screener may be exempted from completing the final screener administration. Instead, these students should be assessed using a high ability approved achievement assessment, which provides a more accurate representation of advanced mathematical readiness.

Chapter 5: Parent Notification and Additional Resources

Parent Notification

Schools should administer each assessment according to vendor-specified screener windows and review the data to identify students who are at risk. Within 15 days of making an “at risk” determination, schools must notify families using vendor-provided family letters and a copy of the completed Individual Mathematics Plan. This template will help educators track assessment data, document intervention strategies, and record additional relevant information. Documentation of the intervention services and progress monitoring information should be added to the student’s plan and provided to families on a cadence determined by the corporation or school.

Additional Resources and Information

For additional information about Indiana's Tiered System of Supports for Mathematics, the two approved kindergarten through grade two mathematics screeners, and general mathematics content and pedagogy, consult the following resources in the Indiana Learning Lab:

- Indiana Tiered System of Supports Toolkit for Mathematics (Grades K-2)
- Indiana Tiered System of Supports for Mathematics Collection
- Mathematics Instructional Frameworks (Grades K-2)
- Proficiency Level Descriptors: Mathematics (Grades K-2)
- Guide to the K-2 Classroom Assessment Performance Level Descriptors
- Math Lesson Planning - The Math Block Collection
- Math Instructional Routines Collection
- Sample K-5 School Intervention Schedules
- Tier I Intensification Strategies
- Individual Mathematics Plan template (editable)

Chapter 6: References

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