IMAGINING the possibilities. MAKING THEM HAPPEN.

Indiana Department of Education

Glenda Ritz, NBCT
Indiana Superintendent of Public Instruction

ISTEP+ 2016-17

Using the Blueprints and Instructional & Assessment Guidance for Math Grades 3-8 and 10

Blueprints

ISTEP+ Grade 5 Mathematics Blueprint

Reporting Category	Description	Percent Range*
Number Sense	Questions may include using a number line to compare fractions, mixed numbers and decimals, explaining different ways to interpret a fraction, understanding the relationship between place value and powers of ten, rounding decimals up to thousandths to any place, and interpreting percents as part of a hundred.	4-14%
Computation	Questions may include multiplying multi-digit whole numbers fluently, dividing a 4-digit dividend by a 2-digit divisor with remainders, adding and subtracting fractions with unlike denominators, multiplying and dividing fractions by whole numbers, solving problems using the four operations with decimals to hundredths, and solving problems by applying the commutative, associative, and distributive properties.	20-30%
Algebraic Thinking and Data Analysis	Questions may include solving real-world multiplication and division problems, solving real-world problems involving fractions by using the four operations, solving real-world problems involving decimals to hundredths by using the four operations, graphing whole number coordinates on a coordinate plane, representing real-world problems by graphing or interpreting ordered pairs on a coordinate plane, evaluating linear expressions with up to two variables that are based on real-world problems, identifying questions that can be addressed with data, interpreting data from tables and graphs, making predictions based on data, and understanding measures of center and frequency to describe data.	22-32%
Geometry and Measurement	Questions may include identifying, describing, and drawing triangles and circles, understanding the relationship between radius and diameter, classifying polygons in a hierarchy based on properties, solving multi-step real-world problems based on conversions within a measurement system, finding the area of rectangles with fractional side lengths, solving real-world problems based on finding the area and perimeter of triangles, parallelograms, and trapezoids, and finding the volume of right rectangular prisms.	20-30%
Mathematical Process	Questions may include making sense of problems an persevering in solving them, reasoning abstractly and quantitatively, constructing viable arguments and critiquing the reasoning of others, modeling, using appropriate tool strategically, attending to precision, and making use of structure.	9-19%

* This range represents the approximate emphasis for each reporting category on the assessment.

Instructional and Assessment Guidance

- **Purpose**: Provide guidance at the standard-level regarding the assessment to assist in instructional decisions.

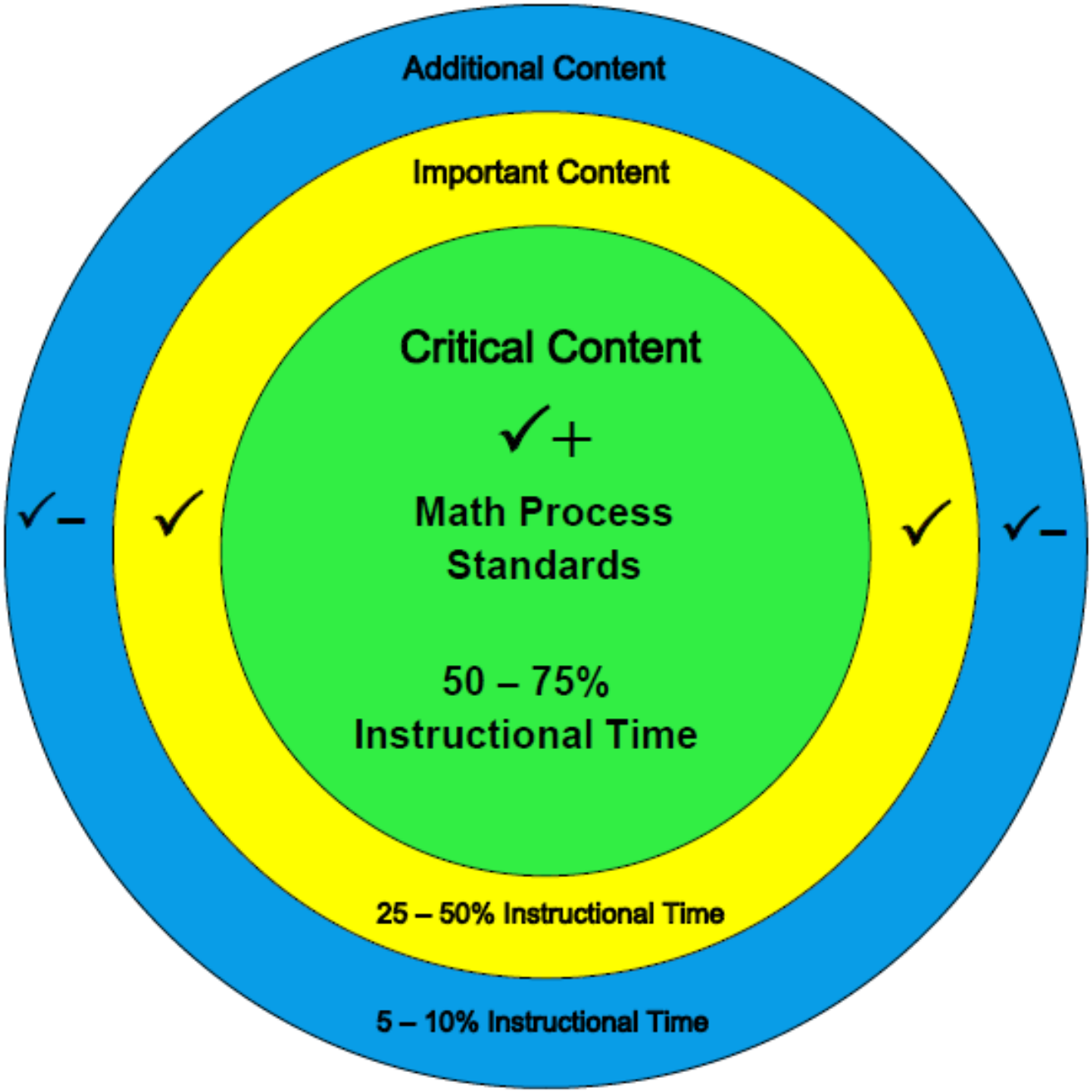
Instructional and Assessment Guidance
ISTEP+: Mathematics – Grade 5

Symbol	Content Priority	Approximate Instructional Time
✓+	Critical	50 – 75%
✓	Important	25 – 50%
✓–	Additional	5 – 10%

** Represents standards that may be assessed on ISTEP+ Part 1 and ISTEP+ Part 2. All standards may be assessed on ISTEP+ Part 2.*

Strand 1 Number Sense		Strand 2 Computation		Strand 3 Algebraic Thinking		Strand 4 Geometry		Strand 5 Measurement		Strand 6 Data Analysis		Strand 7 Mathematical Process	
5.NS.1	✓	*5.C.1	✓+	*5.AT.1	✓+	5.G.1	✓	*5.M.1	✓+	*5.DS.1	✓	*PS.1	✓+
5.NS.2	✓	5.C.2	✓+	*5.AT.2	✓+	*5.G.2	✓	5.M.2	✓	5.DS.2	✓	*PS.2	✓+
5.NS.3	✓–	5.C.3	✓–	*5.AT.3	✓			*5.M.3	✓+			*PS.3	✓+
5.NS.4	✓–	5.C.4	✓+	*5.AT.4	✓			5.M.4	✓			*PS.4	✓+
5.NS.5	✓–	5.C.5	✓+	*5.AT.5	✓+			*5.M.5	✓+			*PS.5	✓+
5.NS.6	✓	5.C.6	✓–	5.AT.6	✓			*5.M.6	✓			*PS.6	✓+
		5.C.7	✓+	5.AT.7	✓							*PS.7	✓+
		*5.C.8	✓+	*5.AT.8	✓							*PS.8	✓+
		*5.C.9	✓+										

- *The Mathematical Process Standards should be taught on a regular basis in connection with the content standards. The Process Standards will be assessed in conjunction with content standards.*
- *When creating curriculum, consider content that may be taught after ISTEP+ Part 1 (Applied Skills; March), given the standards that may be assessed on ISTEP+ Part 1 and considering what makes sense instructionally. It is important not to leave too many standards to be taught after March. ISTEP+ Part 1 contributes approximately 30% to a student's scale score, and ISTEP+ Part 2 (Multiple-Choice and Technology-Enhanced Items; April/May) represents the remaining approximately 70%. As a starting point to creating curriculum, consider teaching some of the following standards after the ISTEP+ Part 1 Assessment: 5.NS.(3-5), 5.C.6, 5.DS.2*


Additional Content
Important Content
Critical Content
✓+
Math Process Standards
50 – 75% Instructional Time
✓–
✓
✓
✓–
25 – 50% Instructional Time
5 – 10% Instructional Time

Other Resources

http://www.doe.in.gov/standards/mathematics

* Vertical Articulation of Standards
* Standards Correlation Guide
* Standards Resource Guide

http://www.doe.in.gov/assessment/istep-grades-3-8

* Calculator Policy
* Graph Paper Policy
* Math Reference Sheets

Questions

- Please contact the following staff members if you have questions regarding Mathematics:
  - Mary Williams, Grades 3-5, at mwilliams@doe.in.gov.
  - Joe Staten, Grades 6-8 and 10, at jstaten@doe.in.gov.
- For other questions, please contact the Office of Student Assessment by calling (317) 232-9050 or via email at INassessments@doe.in.gov.

IMAGINING the possibilities. MAKING THEM HAPPEN.

Indiana Department of Education

Glenda Ritz, NBCT
Indiana Superintendent of Public Instruction