Using NMPED Provided Formative Assessments to Support Classroom Instruction for K-8 grades

Lynn Vasquez

Division Director of Assessment & Learning Management Systems

Greg Howell

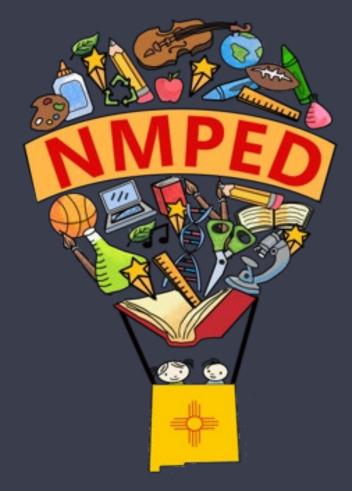
Cognia Director Client Services

Sarah Cude

Istation PD Lead



Investing for tomorrow, delivering today.

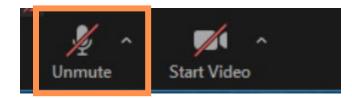


Curriculum & Instruction Convening

December 2, 2020

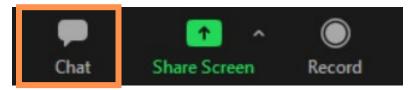
Participating in a session

- Your microphone may have been muted by the Host. This is to prevent background noise and other unwanted sound.
- Microphone and camera controls are located in the lower left corner of the Zoom screen.



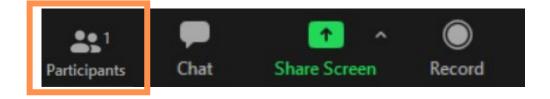
 In smaller meetings, you may wish to unmute your microphone (if allowed). If you do so, please mute yourself when done speaking.

- Chat is the preferred way to communicate with the Host in larger meetings, as it is less disruptive and allows you to post thoughts and questions as they arise, versus waiting for an opportune time to interrupt the speaker.
- The chat window can be accessed by clicking the Chat icon at the bottom of the Zoom screen.

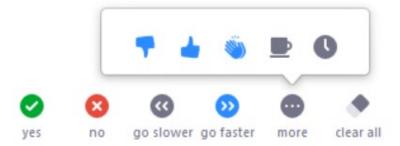


Participating in a session (cont.)

The Participant icon allows non-verbal communication.



 Clicking the Participant icon opens the Participant window to see all participants and access these buttons at the bottom of the Zoom screen.



Our Vision

To impact and inspire education providers to advance and enable pathways for success for all learners.

Our Mission

To serve as a trusted partner in advancing learning.

Assessment helps...

Educators

- Identify students' skills, abilities, and instructional needs
- Employs a variety of assessments that are appropriate for the students and learning targets

Students

- Understand their own instructional strengths and challenges
- Be motivated to maintain or improve their learning

Establishing an Academic Baseline

- Students have varying degrees of emotional needs, instructional needs and learning needs.
- It is more imperative than ever that multiple measures of student understanding are utilized to identify learning needs, determine needs, and monitor supports and interventions for students.
- Educators must employ a toolkit of resources and supports to elicit student thinking, identify learning needs and misconceptions, and measure progress in relation to priority standards and learning targets.

Formative Assessments



Formative

A planned, ongoing process used by students and teachers to elicit and use evidence of student learning to improve student understanding of intended learning outcomes and support students to become self-directed learners.

Formative Practices

High quality formative practices are inseparable from instruction and are used to provide in the moment feedback to students and for teachers to gain insight into student thinking so they can adjust instruction to best meet students' learning needs.



Formative Assessment



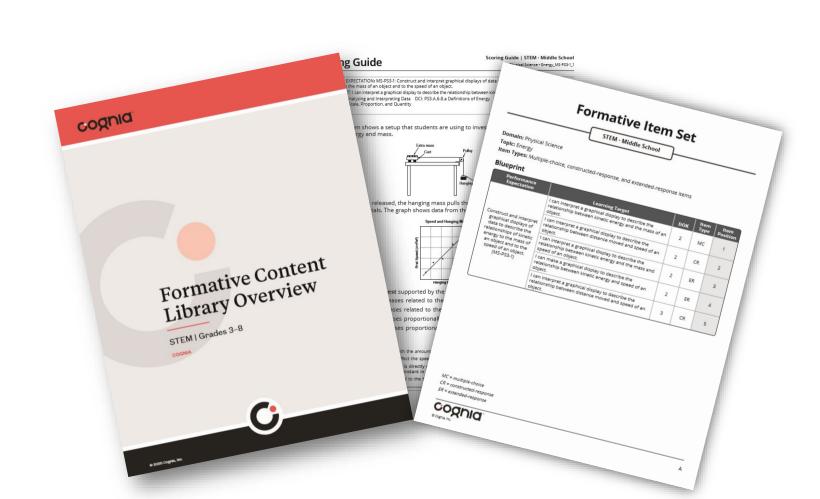
Reading, Mathematics, and STEM

Cognia formative assessment resources

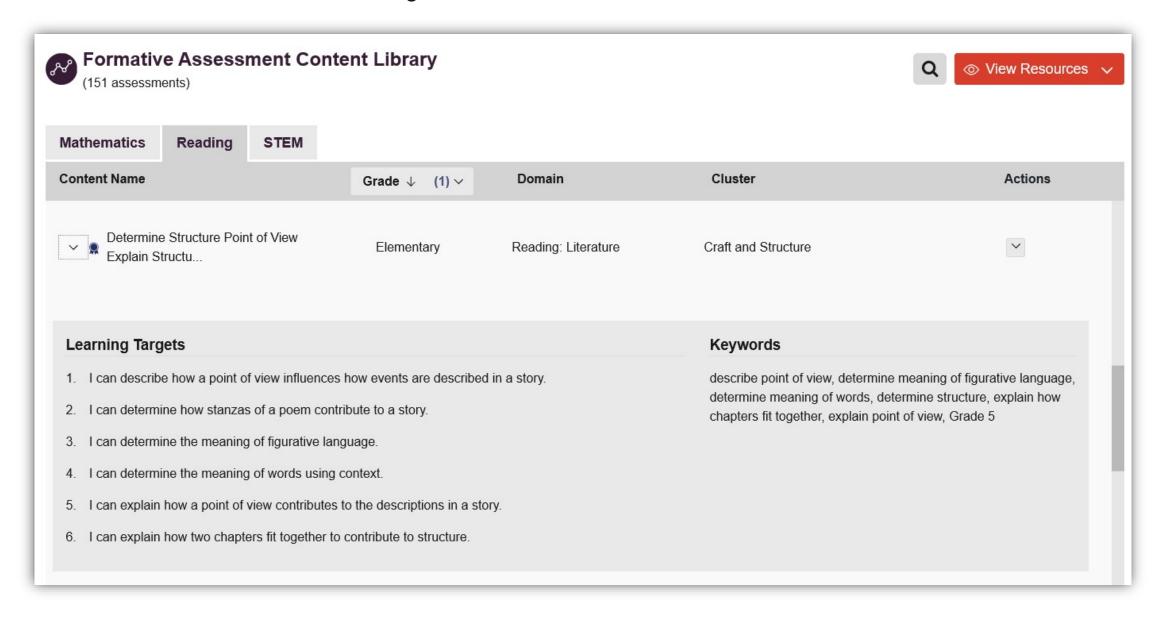
Grades 3-8

Content Library
Overview
(Item Inventory)

Formative Item Sets



Content Library





cognia

Formative Content Library Overview

Mathematics | Grades 3-8

COGNIA



es acres Comple &



© 2019 Cognia, Inc.

Table of Contents

For	mative Item Sets—Mathematics	
	Purpose	
	Components	
	Design Specifications	2
	ltems	2
Ma	thematics Blueprints	2
	Grade 3 Formative Item Sets	4
	Grade 4 Formative Item Sets	6
	Grade 5 Formative Item Sets	8
	Grade 6 Formative Item Sets	ľ
	Grade 7 Formative Item Sets	1
	Grade 8 Formative Item Sets	I

Grade 5 | Formative Item Sets

Name/Item Set	Domain	Cluster	Item Position	Item Type	DOK	Learning Target
Interpret	Geometry	Graph points on the coordinate plane to solve real-world and mathematical problems.	1	MC	1	I can read and interpret a coordinate plane.
Coordinate Plane_Graph Quadrant 1_1			2	MC	2	I can represent real-world and mathematical problems by graphing points in the first quadrant.
			3	MC	2	I can represent real-world and mathematical problems by graphing points in the first quadrant.
			4	MC	2	I can represent real-world and mathematical problems by graphing points in the first quadrant.
			5	CR	2	I can represent real-world and mathematical problems by graphing points in the first quadrant.
Use Line Plot_ Solve Problems	Measurement and Data	rement and Represent and Interpret Data	1	MC	2	I can use a line plot to display a data set of measurements in fractions of a unit.
with Fractions_1			2	MC	2	I can use a line plot to display a data set of measurements in fraction of a unit.
			3	MC	2	I can use a line plot to display a data set of measurements in fractions of a unit.
	Mathematics Blueprints		4	MC	3	I can use operations on fractions to solve problems involving information presented in line plots.
			5	MC	3	I can use operations on fractions to solve problems involving information presented in line plots.
			6	CR	3	I can use a line plot to display a data set of measurements in fractions of a unit.



Formative Item Set

- Content area, domain, and cluster
- Blueprint
 - Focus standards
 - Learning targets
 - Item types
 - Depth of Knowledge level
 - Item position

Formative Item Set

Mathematics · Grade 7

Domain: Geometry

Cluster: Solve real-life and mathematical problems involving angle measure, area, surface area, and volume

Item Types: Multiple-choice and constructed-response items

Blueprint

Standard(s)	Learning Target	рок	Item Type	Item Position
Solve real-world and mathematical problems involving area, volume and surface area of two-and three-dimensional objects composed of	I can find the area of an irregular figure when given the side lengths.	3	MC	A-1
triangles, quadrilaterals, polygons, cubes, and right prisms. (07.G.02.06)	I can find the volume of a rectangular prism and triangular prism given the measures.	2	MC	A-2
Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. (07.G.02.05)	I can use vertical angles, right angles, and the sum of angles in a triangle to find an unknown angle measure.	2	МС	A-3
Solve real-world and mathematical problems involving area, volume and surface area of two-and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. (07.G.02.06)	I can find side lengths of rectangular prisms that have the same volume and find volume given the surface area.	3	CR	B-1



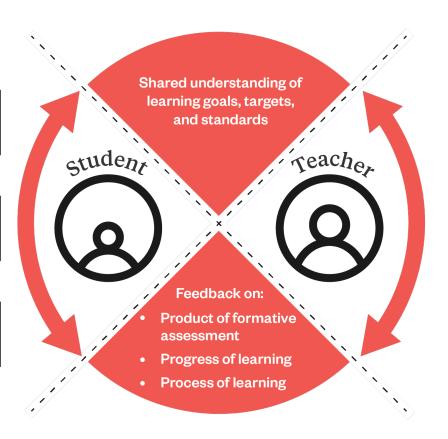
Engage students with formative feedback

Formative Feedback Loop

Self-monitoring strengths and areas to work on

Reflecting on the learning process

Analyzing evidence of thinking and understanding



Adjusting instructional strategy based on evidence

Collecting and analyzing evidence of student understandings

Analyzing evidence of thinking and understanding

Scoring Guide Part A

- Item snapshot
- Alignment to learning target and focus standard
- Answer key
- Distractor rationales

Scoring Guide-Part A

Geometry · Solve real-life and mathematical problems involving angle measure, area, surface area, and volume 1

Scoring Guide | Mathematics · Grade 7

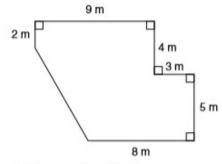
Multiple-Choice Items

STANDARD: Solve real-world and mathematical problems involving area, volume and surface area of two- and threedimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. (07.G.02.06)

LEARNING TARGET: I can find the area of an irregular figure when given the side lengths.

DOK: 3

Joseph's lawn is shown below.



What is the area of the lawn?

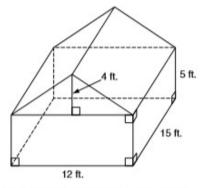
- 82 m²
- @ 76 m²
- @ 72 m²
- @ 68 m²

involving area, volume and surface area of two- and threedimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. (07.G.02.06) LEARNING TARGET: I can find the volume of a rectangular

prism and triangular prism given the measures. DOK: 2

STANDARD: Solve real-world and mathematical problems

2. This diagram shows the dimensions of a new greenhouse.



What is the total volume of the new greenhouse?

- 540 cu. ft.
- @ 900 cu. ft.
- @ 1.080 cu, ft.
- 1,260 cu. ft.

Distractor Rationales

- B. Student incorrectly treats area as two rectangles $(8 \times 5) + (4 \times 9).$
- C. Student multiplies the height by the bottom length
- D. Student subtracts 4 × 7 for the area of the missing triangle.

Distractor Rationales

- A. Student finds the difference between the volume of the rectangular prism and the volume of the triangular
- B. Student finds the volume of the rectangular prism.
- C. Student finds the sum of the volume of the rectangular prism and half the volume of the triangular prism.
- D. Key



Scoring Guide Part B

- Item snapshot
- Alignment to learning target and focus standard
- Rubrics with sample response

Scoring Guide-Part B

Scoring Guide | Mathematics • Grade 7

Geometry · Solve real-life and mathematical problems involving angle measure, area, surface area, and volume 1

Constructed-Response Item

STANDARD: Solve real-world and mathemati objects composed of triangles, quadrilateral LEARNING TARGET: I can find side lengths of

1. A company mails packages us

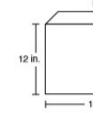
Boxes 1 and 2 have the same

a. What is the width of box 2:

Show your work or explain yo

b. The surface area of box 3 i

Show your work or explain yo



Constructed-Response Rubric				
Score	Description			
4	4 points			
3	3 points			
2	2 points			
1	1 point			
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.			
Blank	No Response.			

Scoring Guide | Mathematics · Grade 7

angle measure, area, surface area, and volume

Geometry · Solve real-life and mathematical problems involving



Constructed-Response Item

Scoring Notes

Part (a) 2 points for correct answer, 4 (inches), with sufficient work or explanation to indicate correct strategy 1 point for correct answer with insufficient or no work or explanation for appropriate strategy with incorrect or no answer

Part (b) 2 points for correct answer, 432 (cubic inches), with sufficient work or explanation to indicate correct strategy

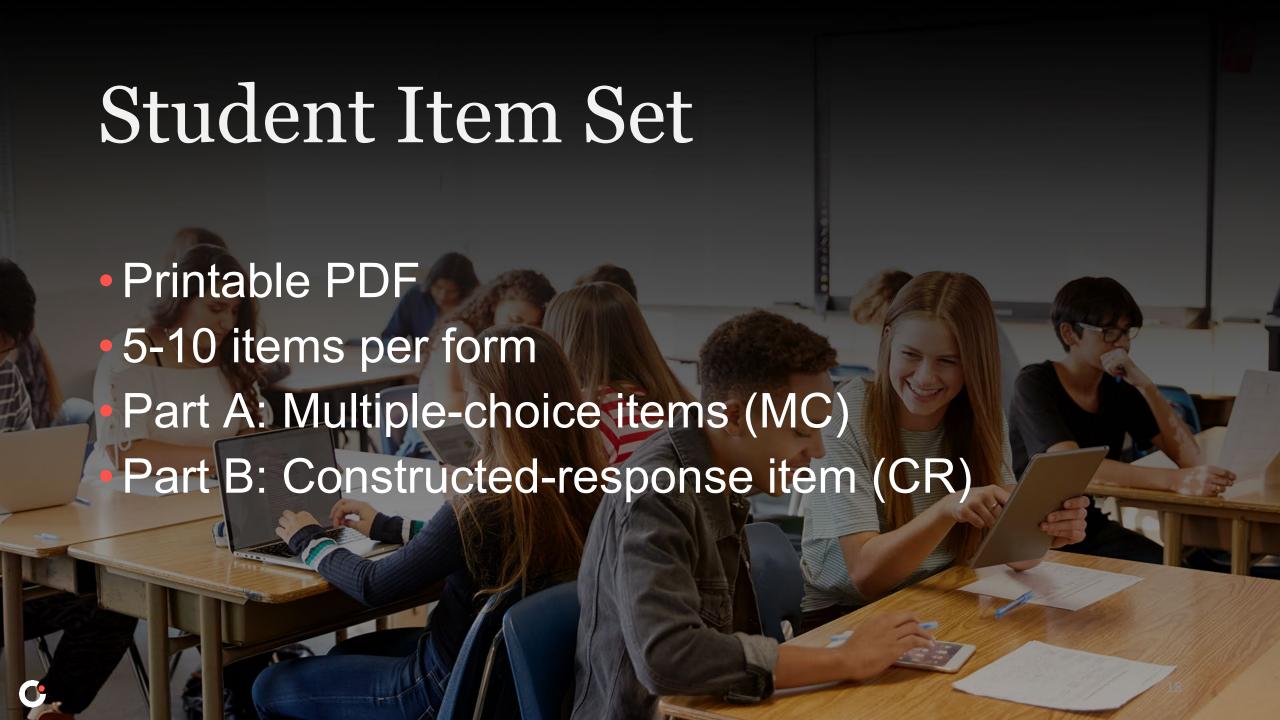
for correct answer with insufficient or no work or explanation

for appropriate strategy with incorrect or no answer

Sample Response

- a. The volume of box 1 is (12)(18)(6) = 1,296 = (27)(12)(w); so w = 1296 + (27)(12) = 4. The width of box 2 is 4 inches.
- b. The height of box 3 is found by 2(9)(8) + 2(9)h + 2(8)h = 348; 34h = 204; h = 6 inches. So the volume is (9)(8)(6) = 432 cubic inches.

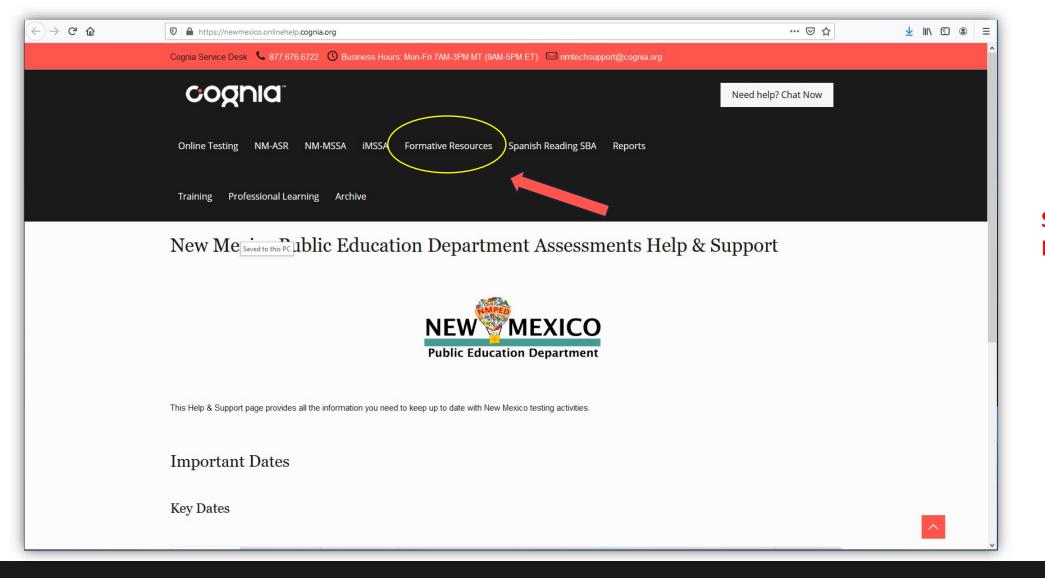
Scoring Guide-Part B



Supporting the formative process

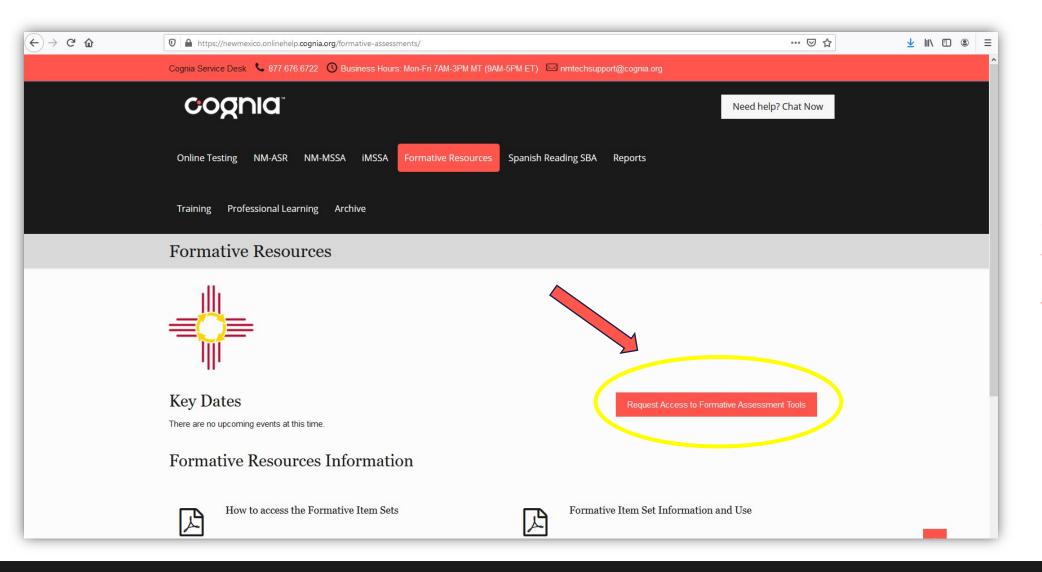
- Clarify learning expectations
- Gauge students' current understanding of key concepts and skills
- Provide real time evidence to inform instruction
- Promote student engagement and reflection
- Support data-driven improvement planning





Select – Formative Resources link

www.newmexico.onlinehelpcognia.org



Select – Request Access link and fill out the request form

www.newmexico.onlinehelpcognia.org





Resources

View and Register for Istation Professional Learning https://www.istation.com/NewMexico/Training

Padlet with Resources for New Mexico Educators

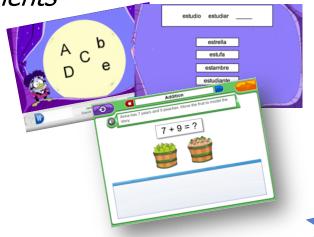
https://padlet.com/scude/nmistation2021

Password: newmexico



Istation

Components

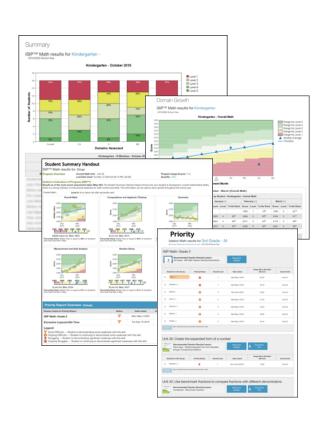


Formative
Assessments in
Reading, Spanish,
and Math



Instant Data





Purpose of ISIP

- Measure Readiness for grade level instruction
- Screen to identify students who are at-risk for struggling with core instruction
- Determine IF and Degree of Intensity of interventions needed
- Progress Monitor and Track Growth

ISIP™ Reading

Measures skills most predictive of future reading success.

Grade	Subtests
Kindergarten	Listening Comprehension Phonemic Awareness Letter Knowledge Vocabulary Oral Reading Fluency*
1st Grade	Phonemic Awareness Letter Knowledge Vocabulary Alphabetic Decoding Reading Comprehension Spelling Text Fluency* Oral Reading Fluency*
2nd and 3rd Grade	Vocabulary Reading Comprehension Spelling Text Fluency* Oral Reading Fluency*

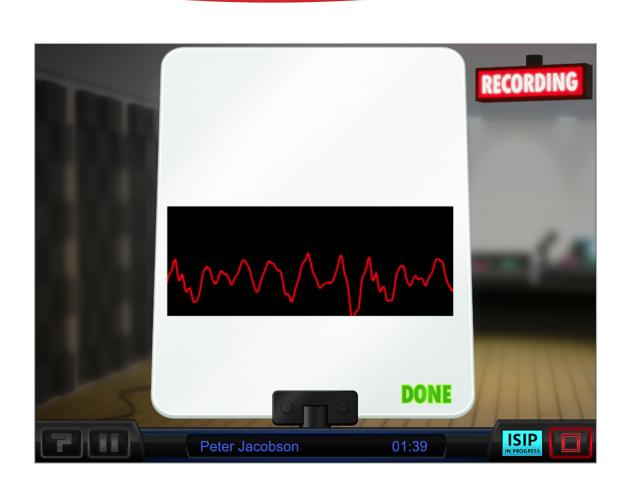
ISIP™ Español

Measures skills most predictive of future Spanish literacy success.

Grade	Subtests
Kindergarten	Listening Comprehension* Phonemic and Phonological Awareness Reading Comprehension Vocabulary
1st Grade	Phonemic and Phonological Awareness Vocabulary Reading Comprehension Writing Component
2nd and 3rd Grade	Vocabulary Reading Comprehension Writing Component Receptive Fluency*



ISIP Oral Reading Fluency



Use voice recognition to automatically measure oral reading fluency for students grades K - 5 in English and Spanish.

ORF is a powerful measure.

- Measures accuracy, rate, and expression
- Correlated to reading comprehension
- Predictive of success on state tests



How can technology help?

- Group Administered
- Virtual Environments
- Manual & Auto-Scoring
- Online Archive

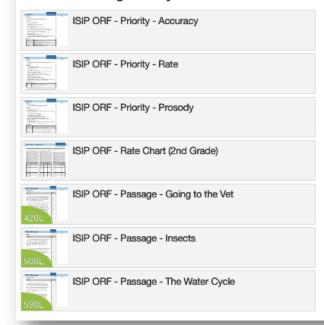


Practice Resources

- Landing Pages
- TDLs
 - Accuracy
 - Rate
 - Prosody



ISIP Oral Reading Fluency



Progress Monitoring

- Assessment Instructions
- Printable Passages
 - Teacher chooses level
 - Enough for bimonthly

Progress Monitoring Instructions

Materials

- passage from ISIP ORF Progress Monitoring Resources
- stopwatch
- clipboard
- Student Oral Reading Fluency Log
- Hasbrouck and Tindal's Compiled ORF Norms (2017)
- · Readability Ranges by Grade

Preparation

Step 1

Select a passage from the ISIP ORF – Progress Monitoring land is for the student to read on-level text at the 50th percentile, I passages from other grades, depending on the student's reac Readability Ranges by Grade to help you select an appropriate

Step 2

Prepare passages for administration by placing the Teacher and Reading Comprehension Questions on the table or on α

Step 3

Have your stopwatch ready.

Administration

Step 1

Place the Student Copy of the passage in front of the stud that you will score their reading fluency and comprehens are to read the best they can at their natural pace. Explair a word, you will help them. Point to the first word and in reading there.

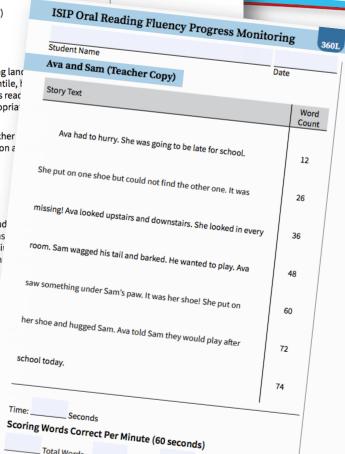
Step 2

When the student starts reading, start the stopwatch.

Step 3

If the student gets stuck on any word for three seconds so they can keep going. Document the student's readir following notations:

- Accuracy: write a check mark (/) above the cor Note: Correctly read words may be left unmark
- Self-Correction: write "sc" above a word that three seconds (considered correct)
- Mispronunciation/Substitution: write erroner in the text



Scoring Words Correct Per Minute (<60 seconds)

_____Total Words - _____Errors) ÷ ______Seconds × 60 = ____

NOTES

NOTES

Istation Oral Reading Fluency | 1

ISIP™ Math

Measures skills most predictive of Math success

Levels of Cognitive Engagement:

Conceptual Understanding

Procedural Fluency

Strategic Competence

Adaptive Reasoning

ISIP Math covers math items in these various domains:

Number Sense (NS)

Computations & Algebraic Thinking (CA)

Measurement & Data Analysis (MDA)

Geometry (G)

After Assessments

Connect Data with Next Steps





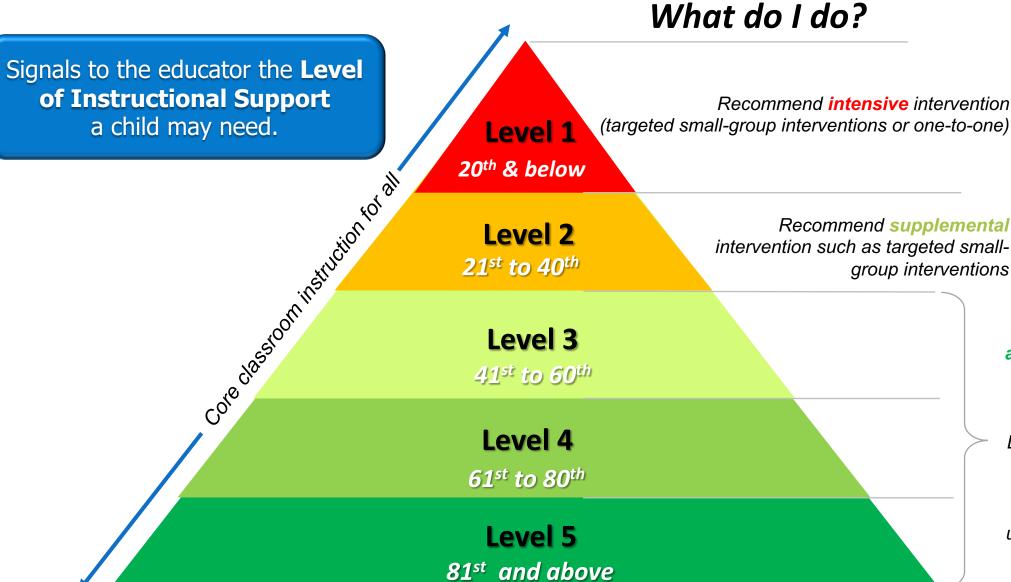
How do we use Istation's Reports?

- Planning Support
- Tracking Growth
- Informing
 Instruction





Istation Levels



Recommend intensive intervention

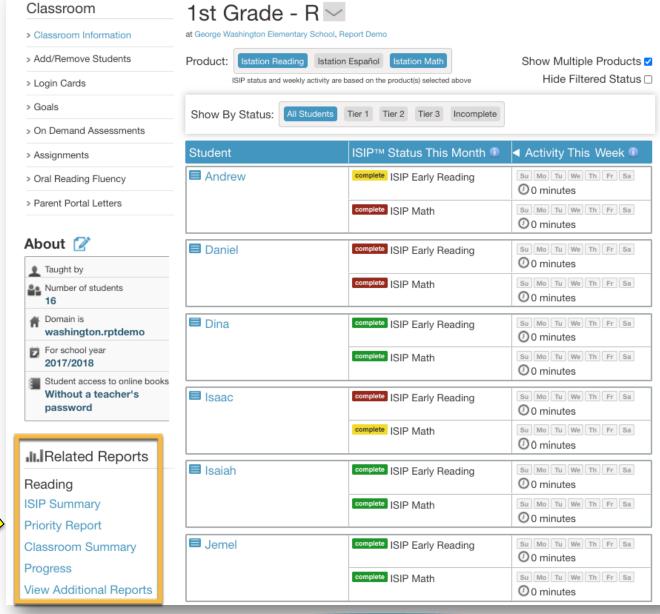
(targeted small-group interventions or one-to-one)

intervention such as targeted small-

Recommend differentiation for all students through high-quality core instruction

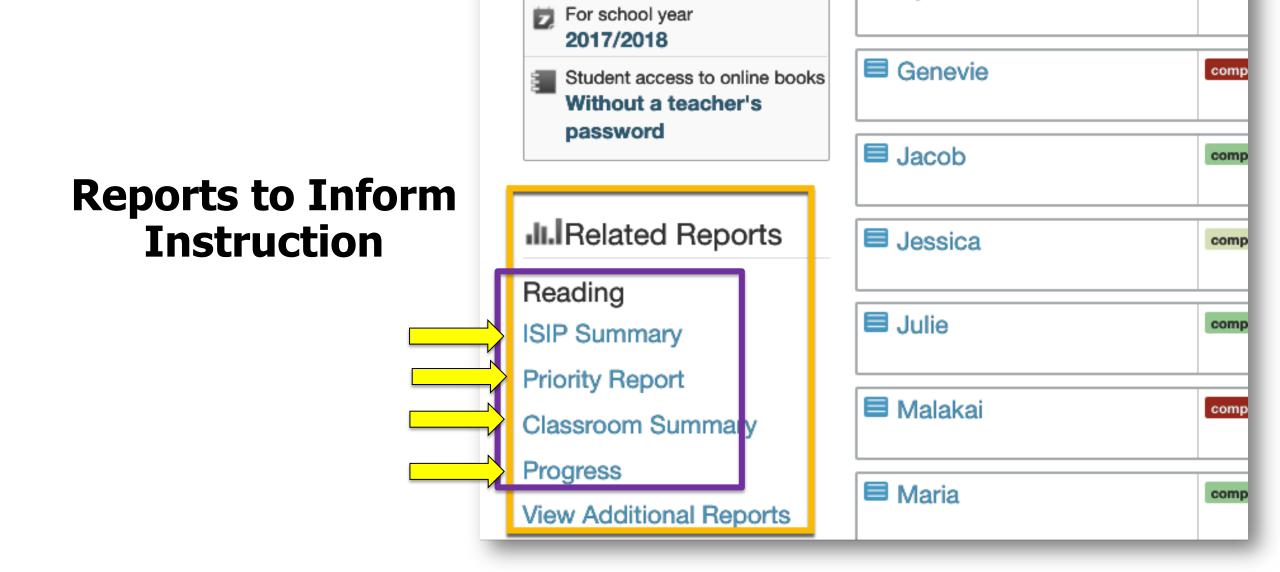
Delineation of top 3 levels serves as communication tool and can be used by teachers to differentiate core instruction

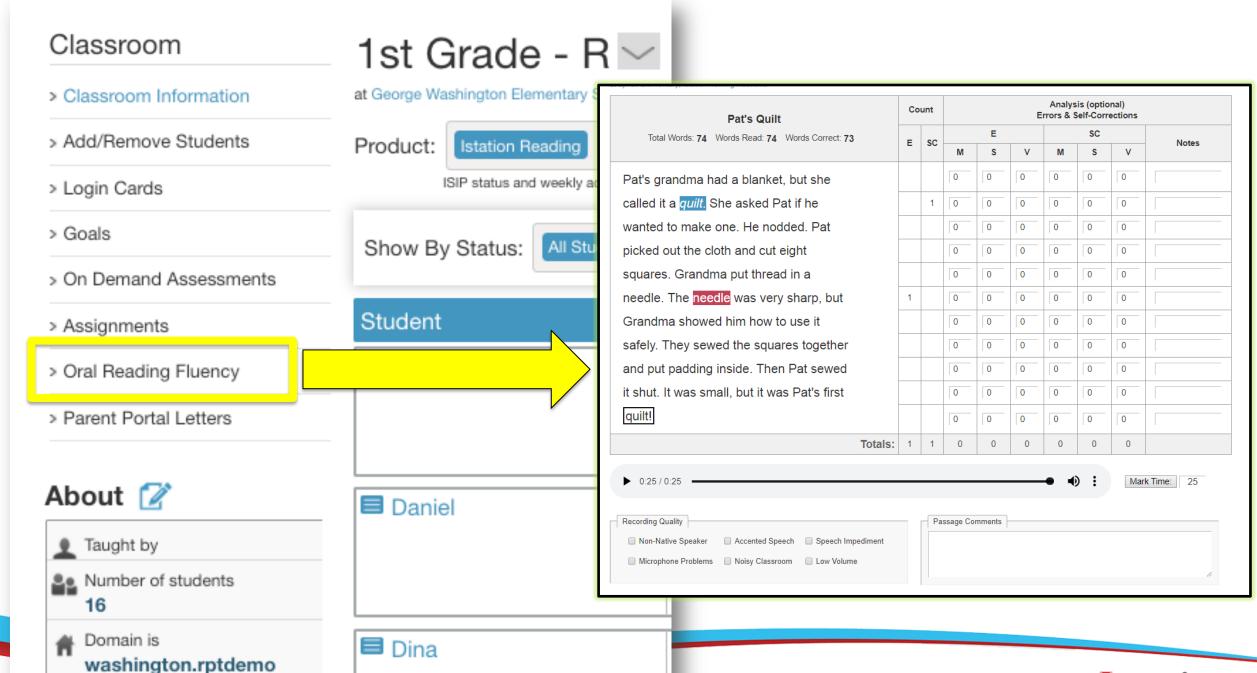
Classroom Page











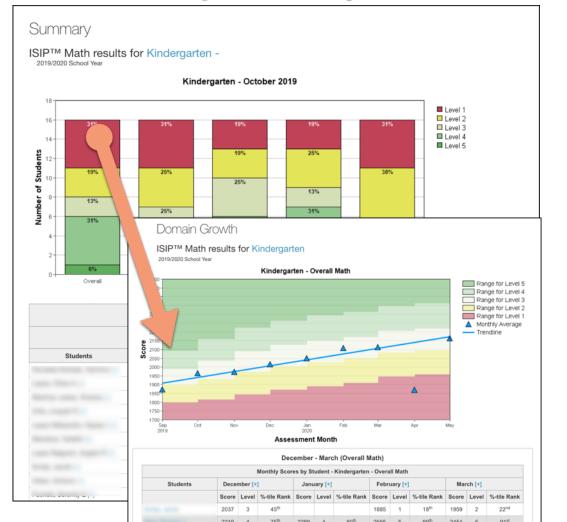
For school year

Istation

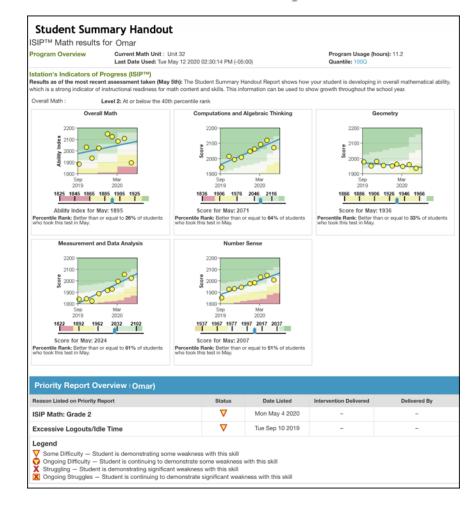
Istation Teacher Level Reports

Track Growth

ISIP Summary Ability Growth



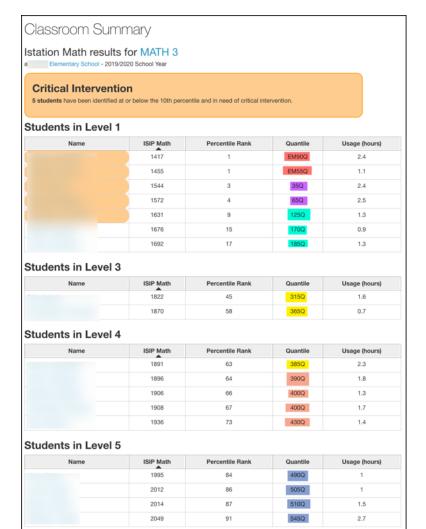
Student Summary Handout



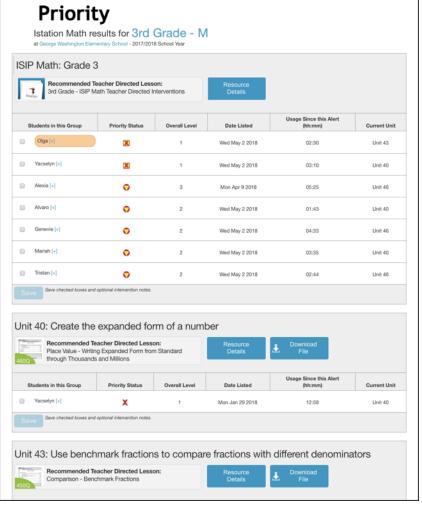
Istation Teacher Level Reports

Inform Instruction

Classroom Summary

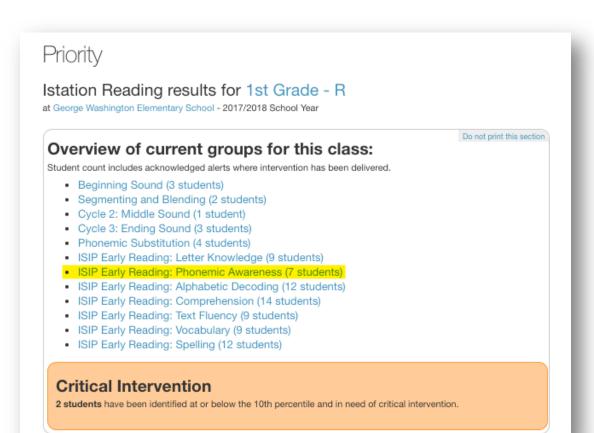


Priority Report





Teacher Connections



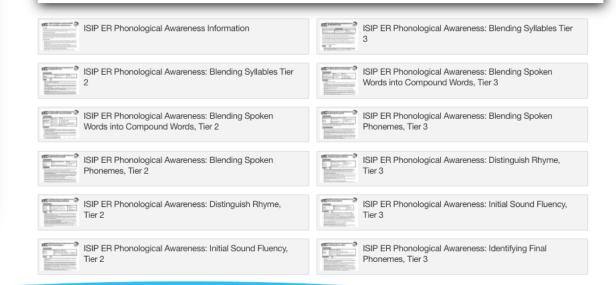


Phonological/Phonemic Awareness – ISIP Early Reading Teacher-Directed Interventions



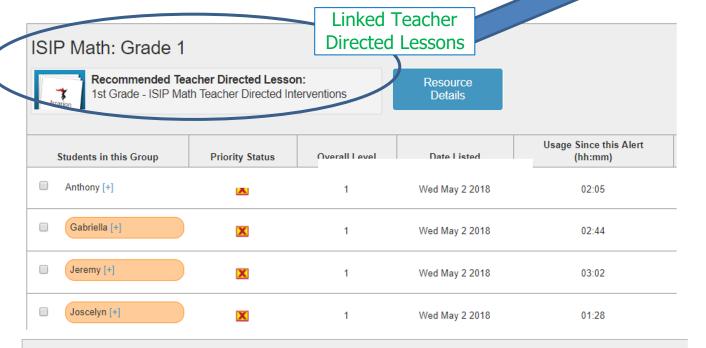
Teacher-directed interventions help struggling students achieve mastery in a particular skill or subskill. The information document includes a suggested instructional sequence to master targeted and prerequisite early reading skills.

There are two groups of lessons designed to deliver targeted instruction to Tier 2 and Tier 3 students with suggestions on which lessons to administer to Tier 1 students to ensure skill mastery.





Priority Report



Unit 19: Relative Magnitude with Part Part Whole

2000 22 Turns backgroundstatuber	Recommended Teacher Directed Lesson:
And Annual Control Con	Part Part Whole - Relative Magnitude with Part-Part-
10Q	Whole

Resource Details



Students in this Group	Priority Status	Overall Level	Date Listed	Usage Since this Alert (hh:mm)
	x	3	Fri Feb 2 2018	22:44
Daniel [+]	V	4	Thu Feb 1 2018	22:33

Number and Operations G1 ISIP Math - Operations - Counting On Cards G1 ISIP Math - Operations - Adding to Your Math Toolbox G1 ISIP Math - Operations - Adding to Your Math Toolbox G1 ISIP Math - Operations - Sign of Operation G1 ISIP Math - Place Value - Base Ten Blocks Battle G1 ISIP Math - Operations - Magical Addends G1 ISIP Math - Place Value - Base Ten Block Basics G1 ISIP Math - Operations - Fact Family Dominoes G1 ISIP Math - Place Value - Mystery Picture G1 ISIP Math - Operations - Three Amazing Addends G1 ISIP Math - Place Value - Ten and Ones

Measurement

G1 ISIP Math - Data Analysis - Graphing	Three Ways	G1 ISIP Math - Algebra - High Fives
G1 ISIP Math - Data Analysis - Analyze a Picture Graphs	and Add Using	G1 ISIP Math - Number Sense - Skip Counting
G1 ISIP Math - Data Analysis - Graphing Rescuel	to the	G1 ISIP Math - Algebra - Which Side of the Street?
G1 ISIP Math - Data Analysis - How Mar	y More?	G1 ISIP Math - Algebra - Odd or Even?

Algebra

In-depth Teacher Directed Lessons



Unit 40

Rounding - Within Three- and Four-Digit

Teacher-Directed Lesso

Lesson Objective

Students will round to the nearest ten and hundred within three a number line

Prerequisite Skills and Knowledge

- Counting by tens and counting by hundreds
- · Basic understanding of multiples of ten and hundred
- Understand how to identify the place value of digits in a nun
- Understand the number of thousands, hundreds, tens, and o
- Correctly identify the indicated place value.
- Understand that a number can be rounded to any place valu



ISIP Math Teacher Resource: Using Multiplication to Solve If-Then Word Problems

Appendix

Integration of the Content and Research-Based Instructional Practice

The Institute of Education Sciences (IES) recommends that instructional materials for interventions for students through grade 4 focus on word problems, specifically on teaching students how to identify the common word-problem types and how to apply this knowledge in solving unfamiliar problems. Students must learn to first recognize the type of word problem, categorize problems accordingly, and then choose reliable problem-solving strategies to find the correct solution. Instruction for Tier 2 and 3 interventions should focus on identifying which information in a word problem is important and which is irrelevant to solving the problem.

The IES explains that understanding simple word problems helps give meaning to math functions by relating them to real-world contexts and that learning to understand the word-problem types not only improves students' success in problem solving but also leads to greater understanding of increasingly complex word problems. To achieve this, teachers must give clear, detailed, step-by-step instructions of how to identify the structures of known, familiar word problems and how they relate to new, unfamiliar word problems. With a focus on explicit instructions of how to link the two types of problems, students will learn to apply the proper solution methods to new problems they encounter.

Strategies Identified to Change Student Outcomes

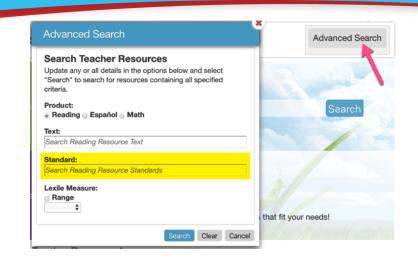
In connection with the fourth-grade Curriculum Focal Point 1 (CFP 1), intervention instruction, as supported by the IES Practice Guide, should often include, but not be limited to, the following examples:

 Explicit and sequential instructions – Teaching students effective methods of problem solving through step-by-step instructions that can be applied to future and more complex problems creates a necessary foundation for further math studies. For example, teachers might



Target Skills in Core and Intervention

Search by Standard



Search by Skill

