Creating Effective Classroom Assessments

Stuart R. Kahl, Ph.D.
Deborah Farrington, M.Ed.
Ellen Vorenkamp, Ed.D.

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Why is this webinar for you?

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Why is this webinar for you?

To help you recognize and support effective classroom assessment practices.

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Webinar Topics

1. Matching tests to their purposes

Webinar Topics

1. Matching tests to their purposes
2. Alignment of tests and test questions to standards

Webinar Topics

1. Matching tests to their purposes
2. Alignment of tests and test questions to standards
3. Test and item quality

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1. Matching tests to their purposes
2. Alignment of tests and test questions to standards
3. Test and item quality
4. Promoting teacher training for creating and using effective classroom assessments

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Data Management Tool

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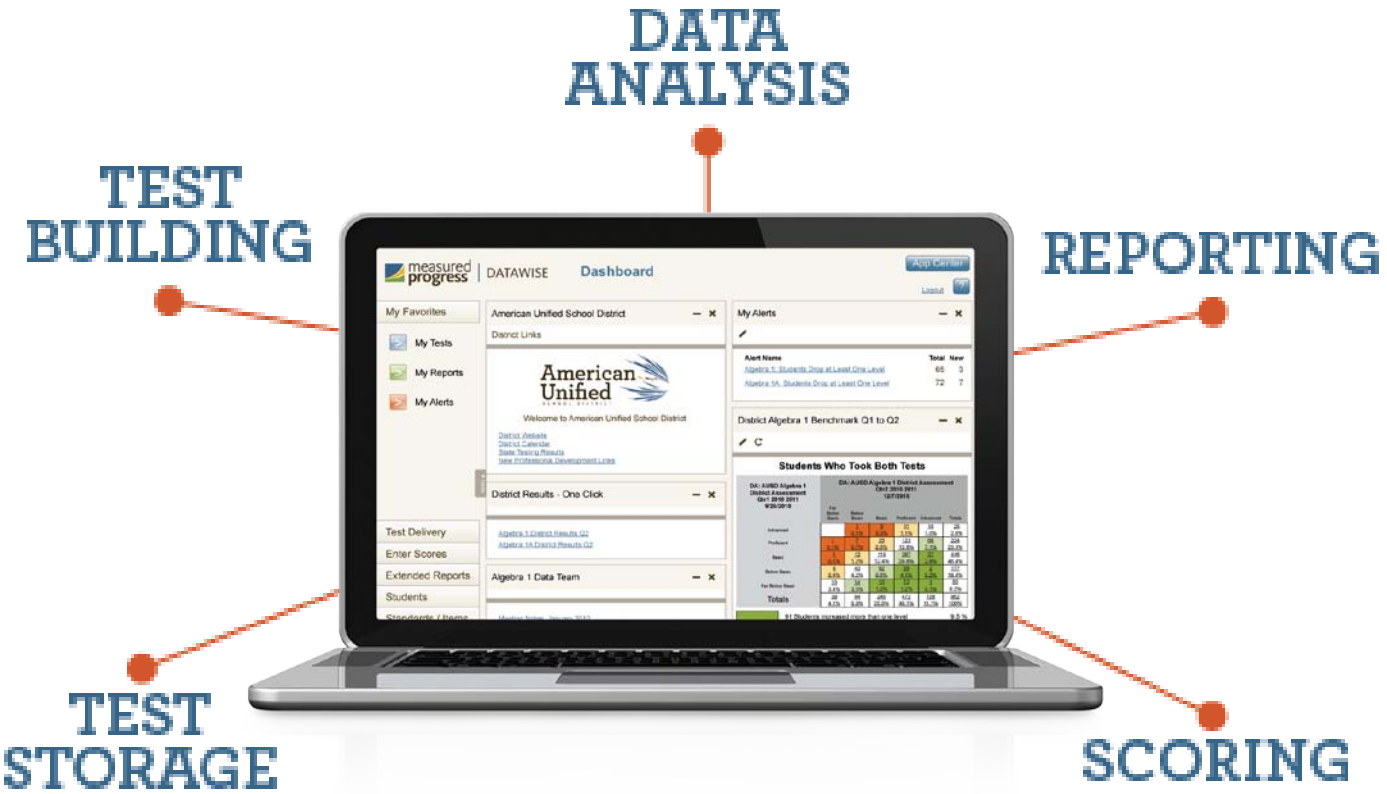
Data Management Tool



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Matching tests to their purposes

1

Categories of Assessment

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Categories of Assessment

External Summative Assessments

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Categories of Assessment

External Summative Assessments

Interim or Benchmark Tests

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Categories of Assessment

External Summative Assessments	Interim or Benchmark Tests	Summative Classroom Tests

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Categories of Assessment

External Summative Assessments	Interim or Benchmark Tests	Summative Classroom Tests	Formative Assessment

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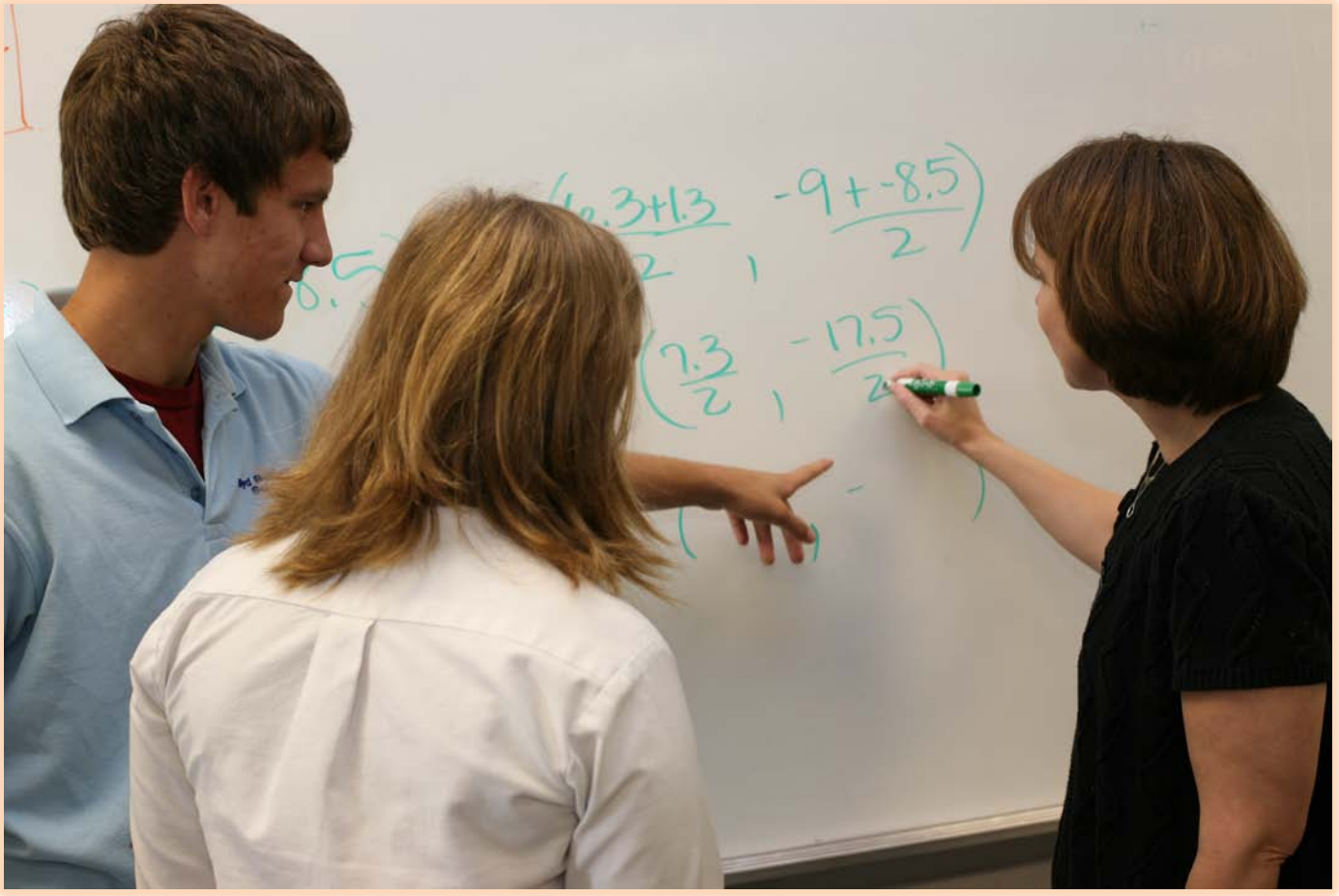
Formative Assessment



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Formative Assessment

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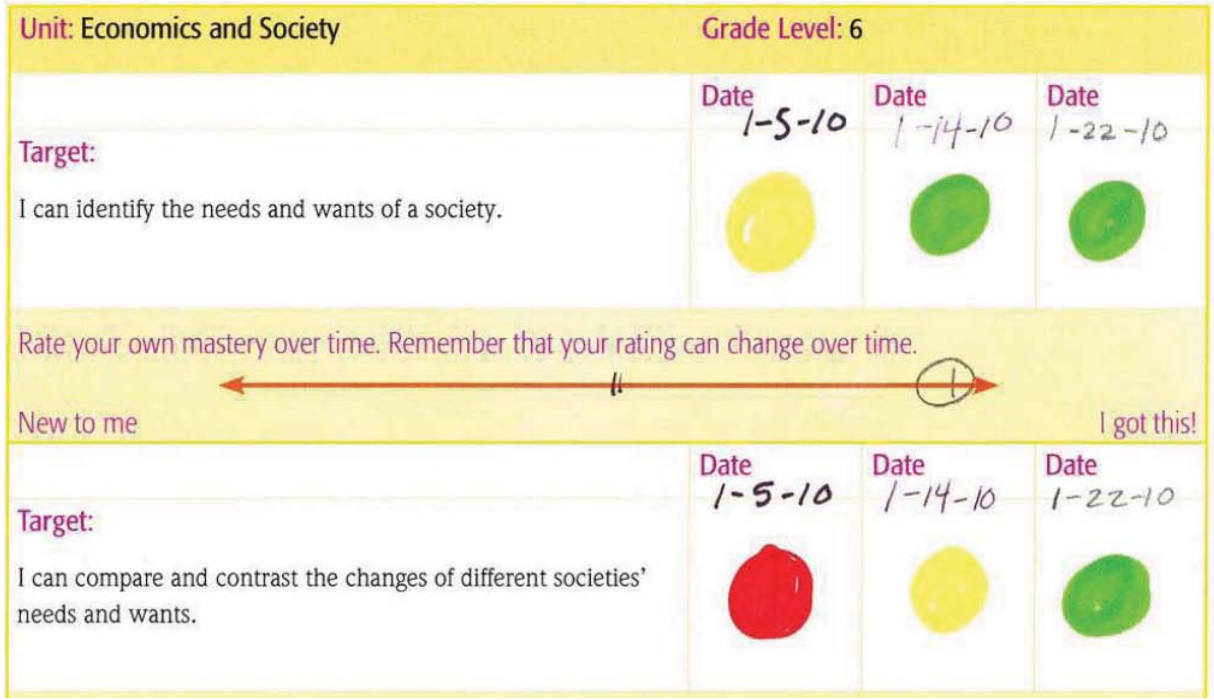
Formative Assessment

Learning Target Self-Assessment: Completed



Unit: Economics and Society — Grade Level: 6

Target:	Date 1-5-10	Date 1-14-10	Date 1-22-10
I can identify the needs and wants of a society.			

Rate your own mastery over time. Remember that your rating can change over time.

New to me — I got this!

Target:	Date 1-5-10	Date 1-14-10	Date 1-22-10
I can compare and contrast the changes of different societies' needs and wants.			

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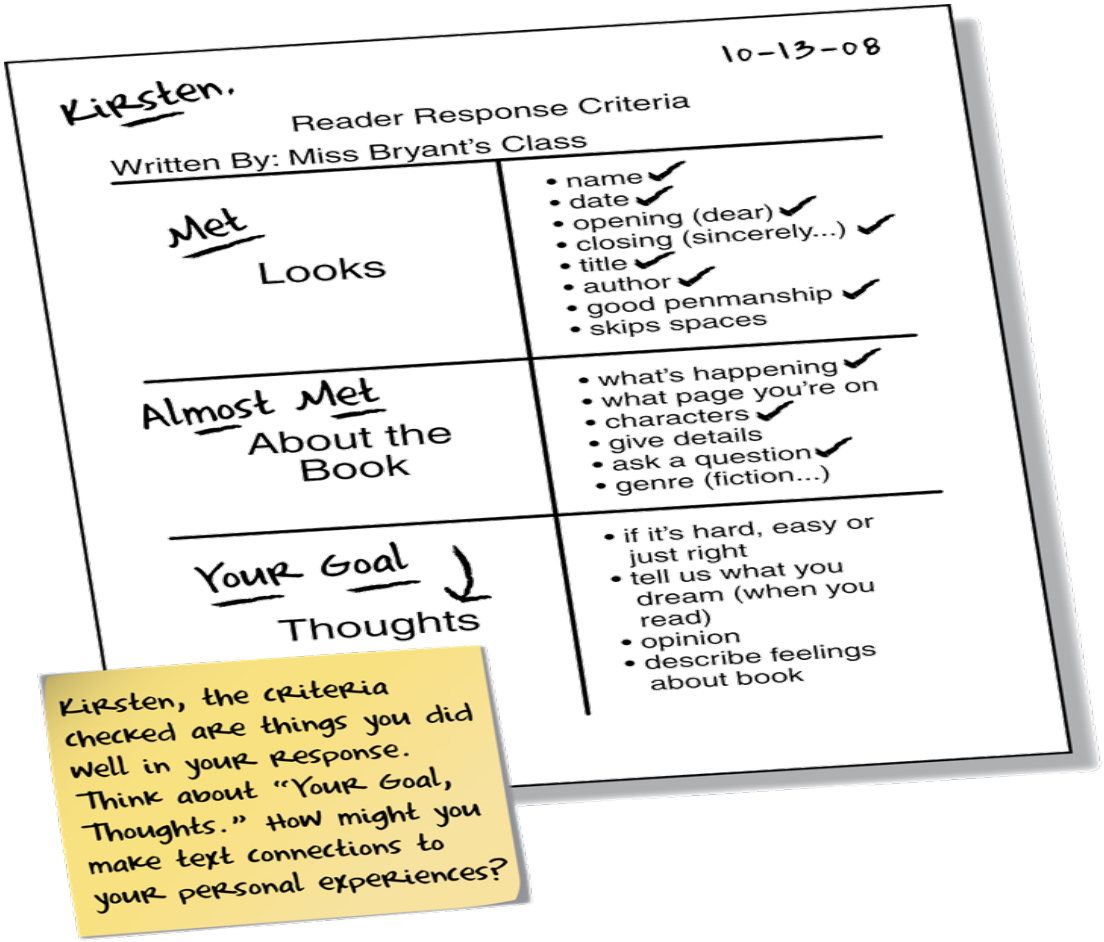
Formative Assessment



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Diagnostic?

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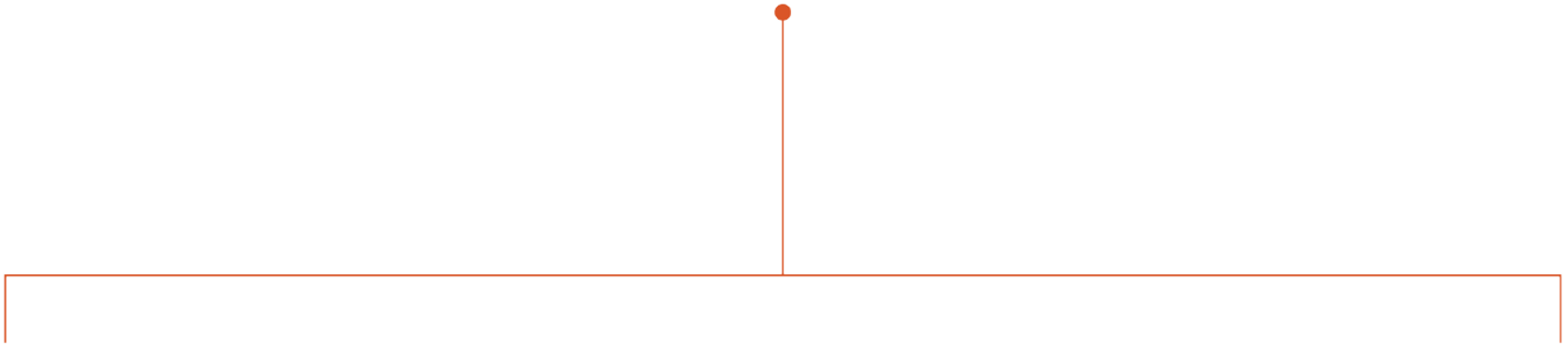
Diagnostic?



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Diagnostic?

External Summative Assessments

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Diagnostic?

External Summative Assessments

Formative Assessment

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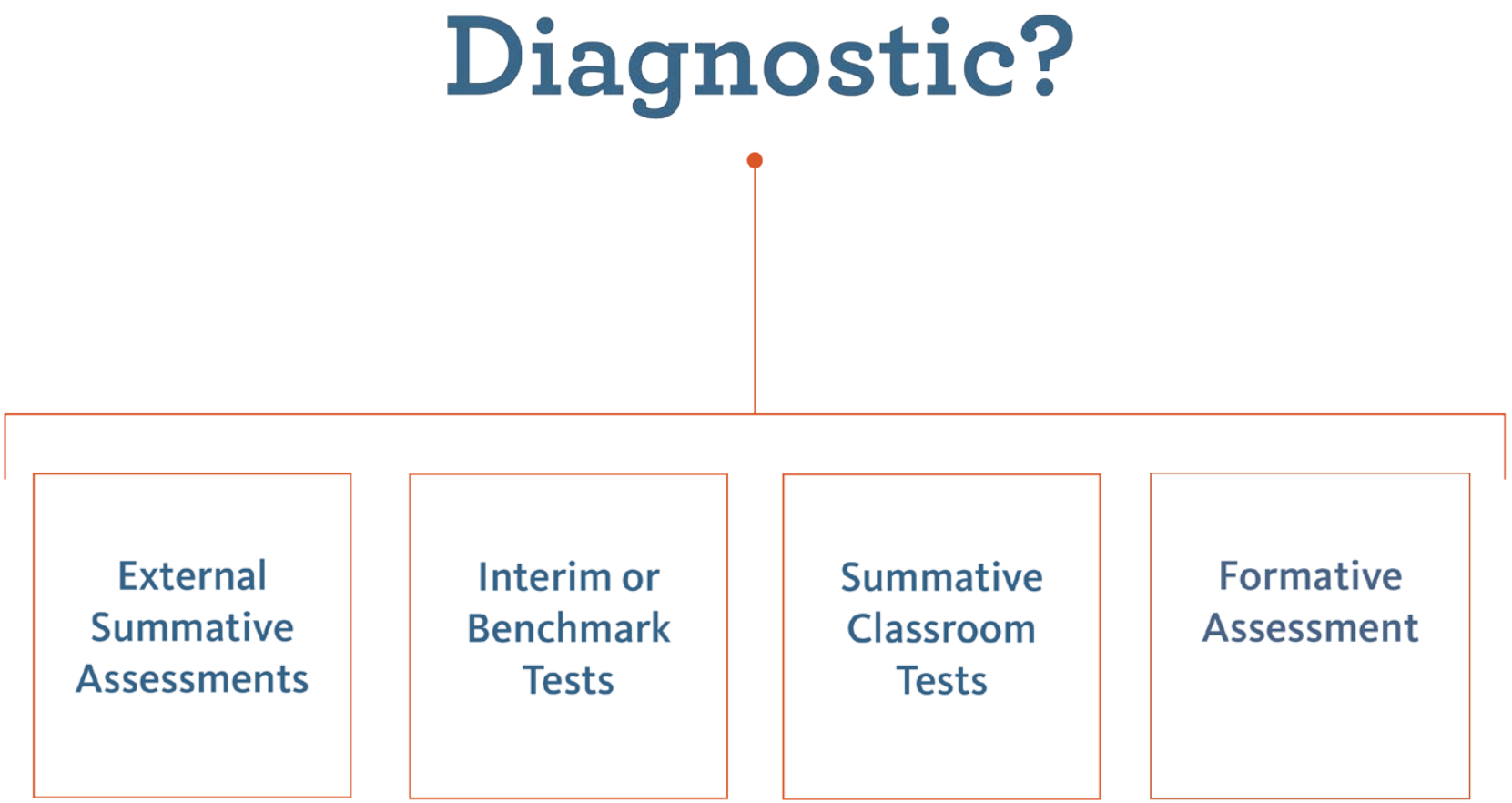

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1. Matching tests to their purposes

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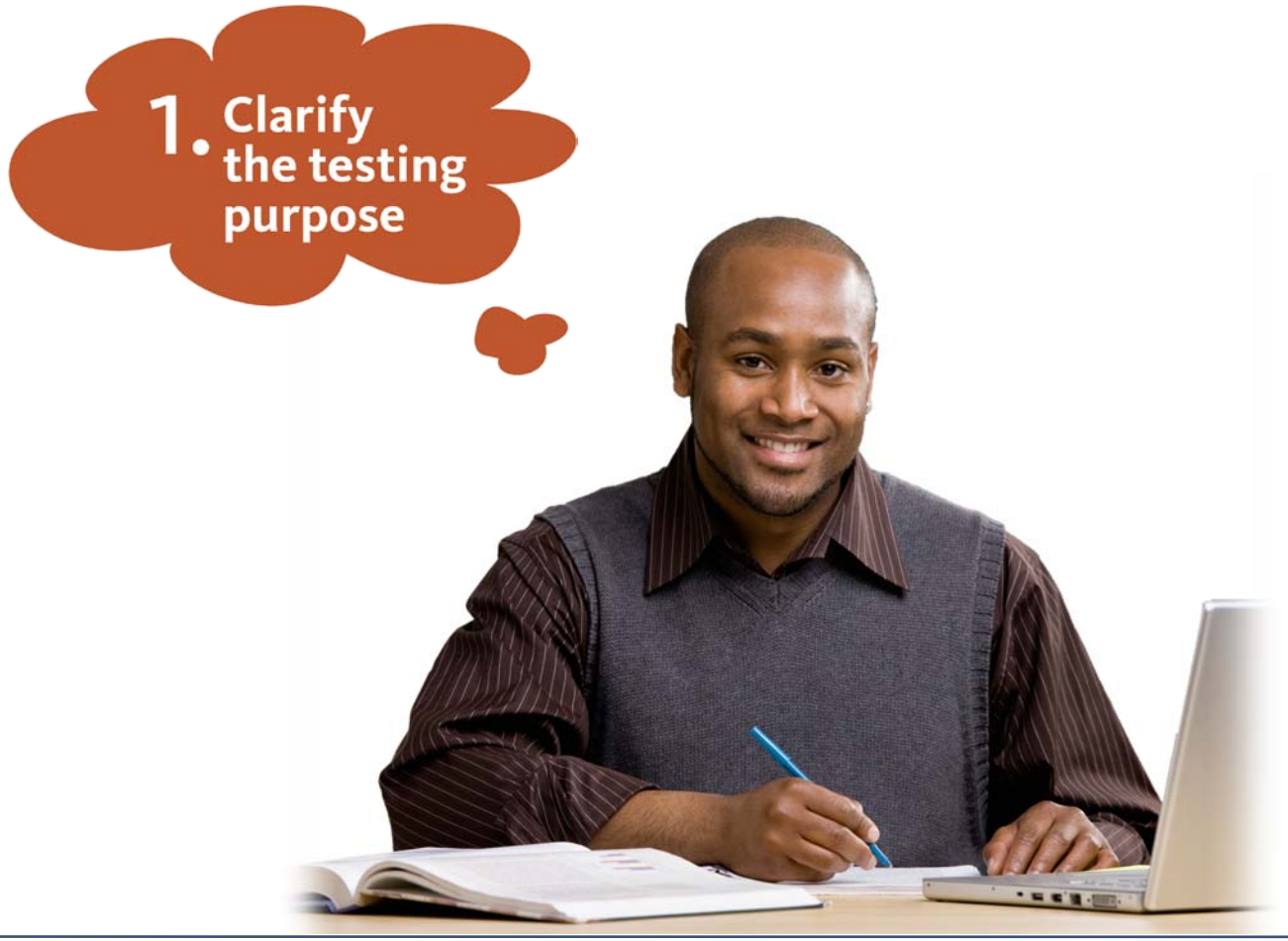
1. Matching tests to their purposes



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1. Matching tests to their purposes

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1. Matching tests to their purposes

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DATAWISE Item Analysis Report

Test Name: Math 6th Grade Cumulative 2 Topics 8 to13 and 15 2011 12 **Test Date:** 1/26/2012

Subject: Math **Grade:** 06

Key: Incorrec / Correct / No Ans

Roll-up level for Standards: (no roll up)

Page Break by: None

Report To Print: Item Analysis

Print/Export

Q#	Correct	Graph	Standard
1	808	226 (22%) / 808 (78%)	Number Sense 1.1 1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.
2	357	677 (65%) / 357 (35%)	Number Sense 1.1 1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.
3	802	232 (22%) / 802 (78%)	Number Sense 1.1 1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.

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Good Tests are Reliable

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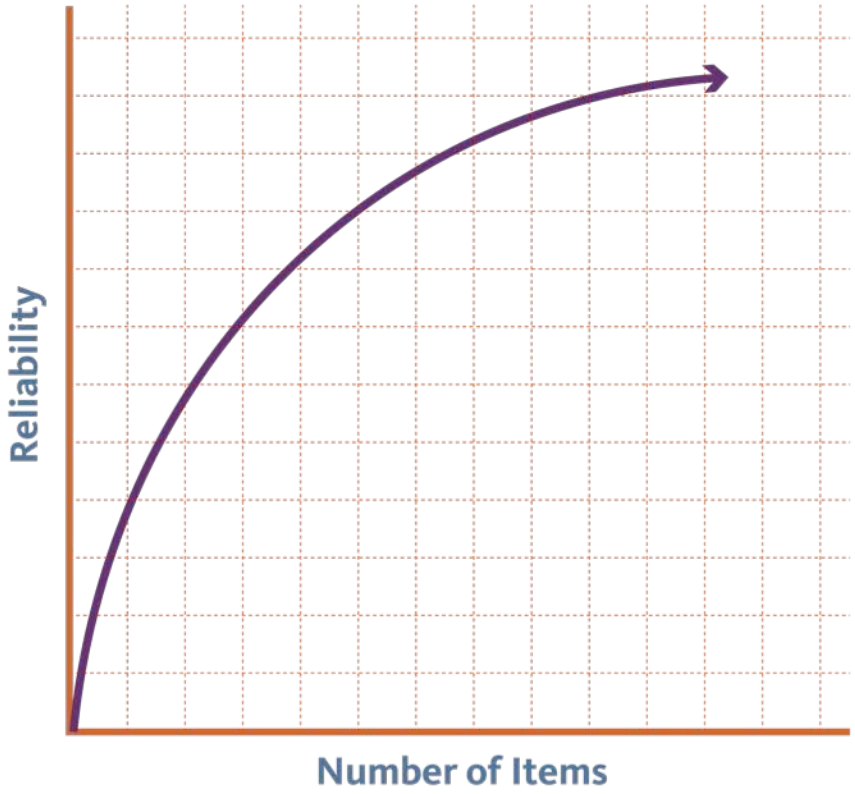
Good Tests are Reliable



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1. Matching tests to their purposes

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Assessment Plan

Name of Assessment: _____

Type of Assessment: ❒ Summative ❒ Interim ❒ Formative

Level of Use: ❒ District ❒ School ❒ Grade Level/Dept. ❒ Classroom

Purpose *Why?*	
Administered *When?* *Who?*	
Data Reported *When?* *Who?* *How?*	
Data Analyzed *What?* *When?* *How?* *Who?*	
Results Used *How?*	

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1. Matching tests to their purposes

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1. Matching tests to their purposes

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Alignment of tests and test questions to standards

2

Four Kinds of Alignment

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Four Kinds of Alignment

1. Categorical concurrence
2. Depth of Knowledge
3. Balance of Representation
4. Range of Knowledge

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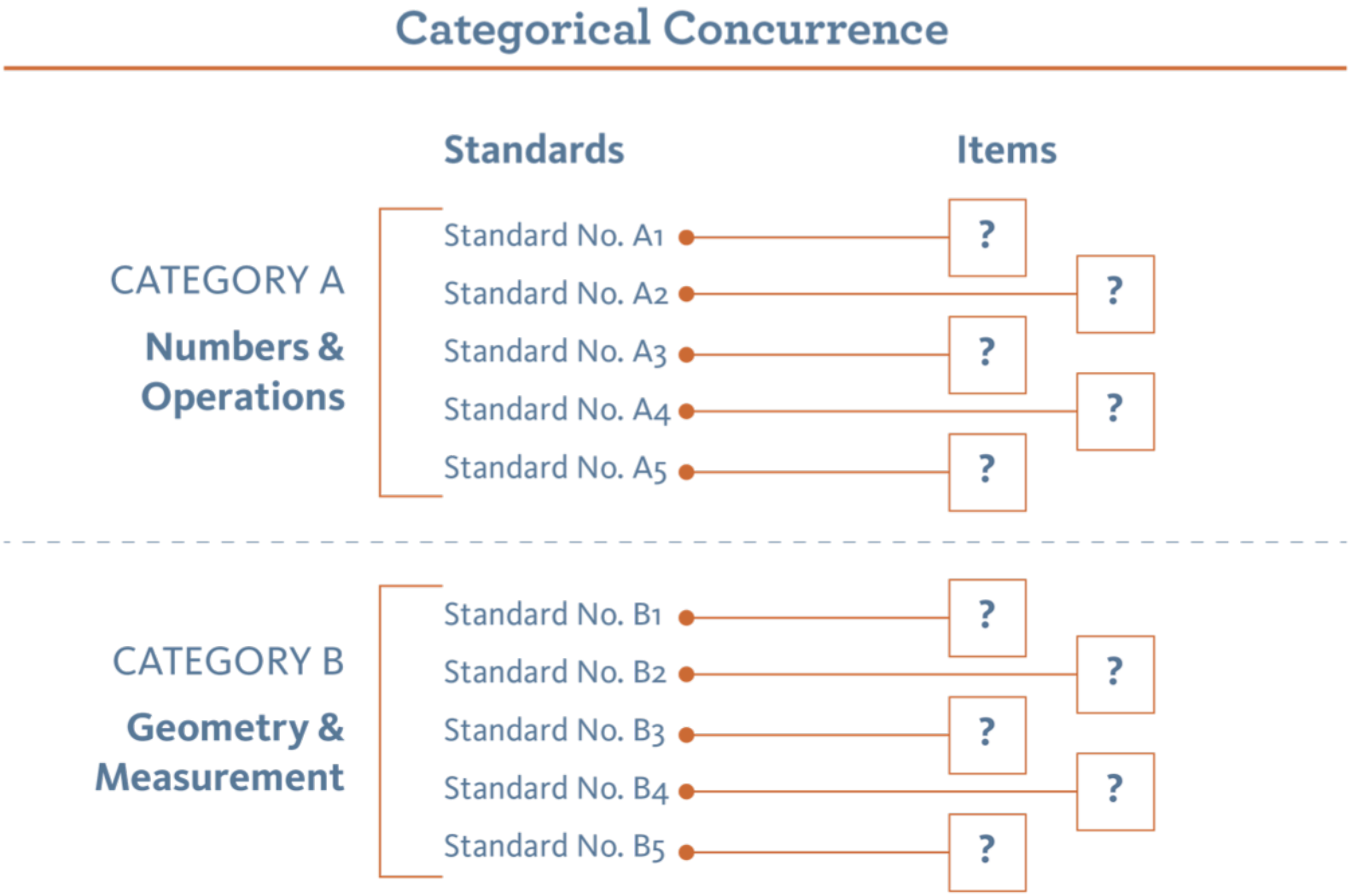
2. Alignment of tests and test questions to standards



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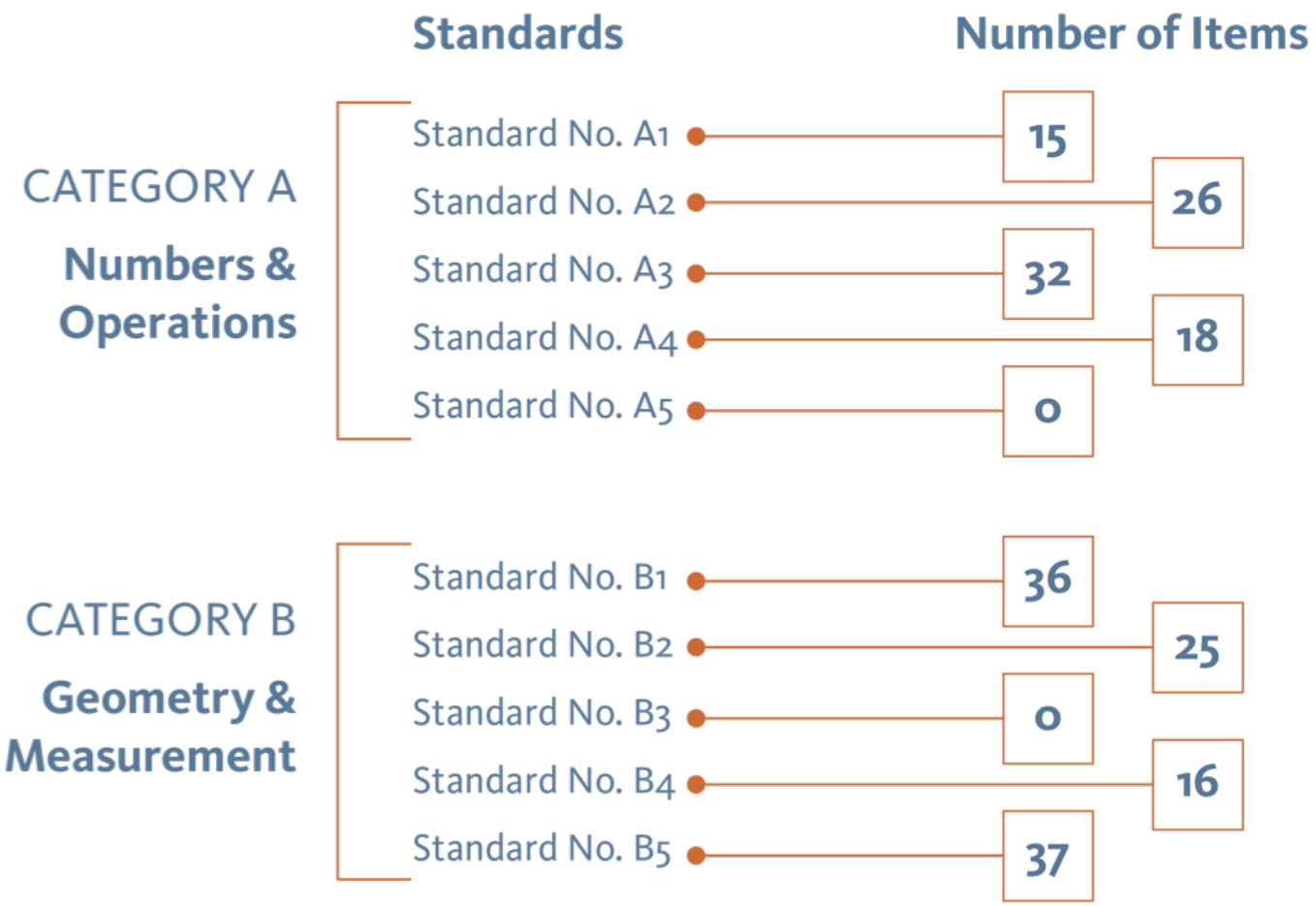
2. Alignment of tests and test questions to standards

Categorical Concurrence



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Depth of Knowledge

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Depth of Knowledge

1. Recall and Reproduction
2. Skills and Concepts
3. Strategic Thinking
4. Extended Thinking

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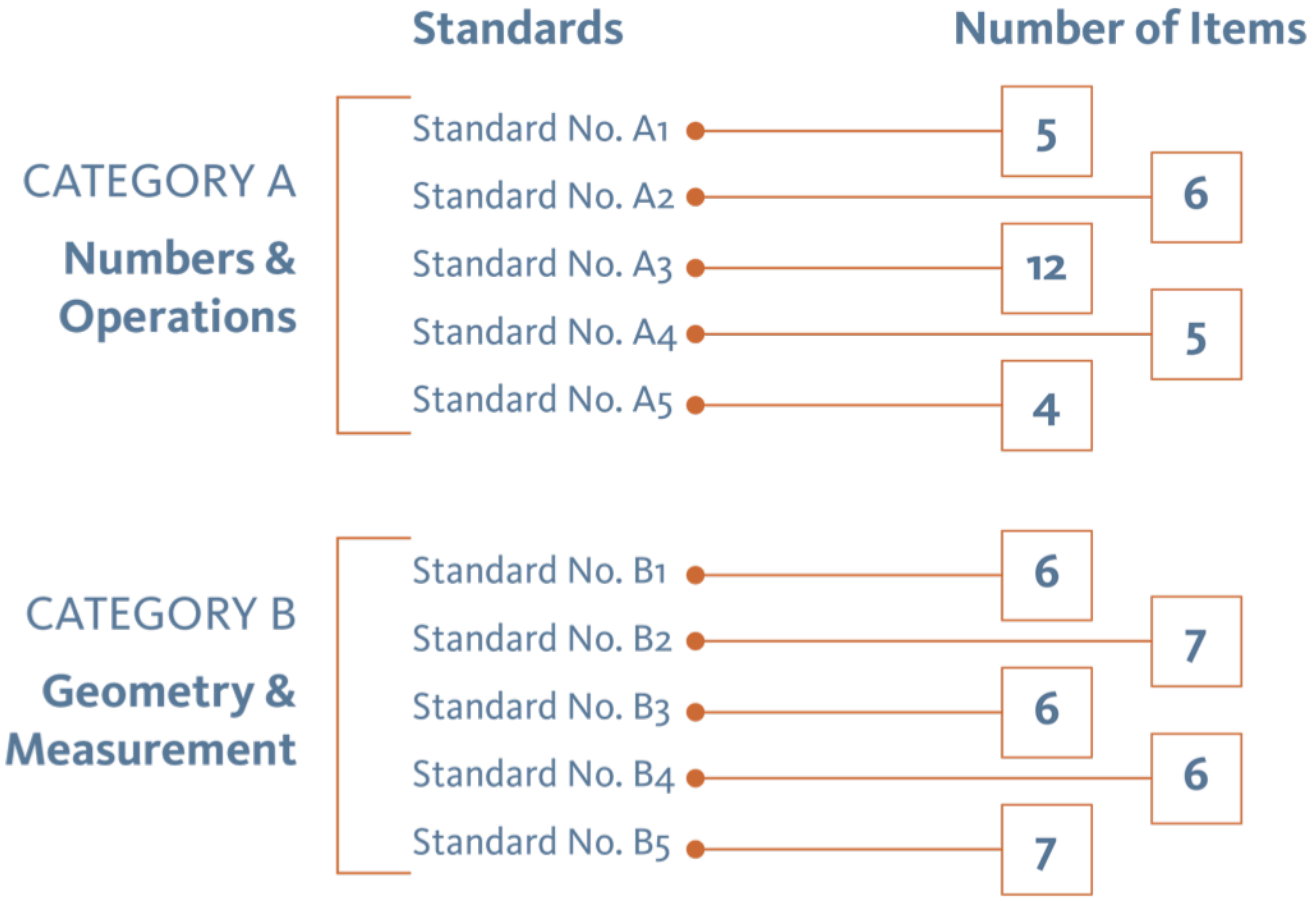
2. Alignment of tests and test questions to standards

Balance of Representation



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Range of Knowledge

4.4.6 A Data Analysis

- 4.4.6 A.2 Read, interpret, select, construct, analyze, generate questions about, and draw inferences from displays of data.

Range of Knowledge

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Range of Knowledge

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2. Alignment of tests and test questions to standards

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2. Alignment of tests and test questions to standards

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DATAWISE Test Blueprint

Template

Content Area:	Grade:	Date Developed:
Testing Window: (Dates for Administration)	Time Needed for Administration:	
Mode of Administration: Online Paper and Pencil	Materials Needed:	
Type of Assessment: Summative Interim Benchmark Formative		
Name of Assessment:		

Item Specifications:

Domain	Standards (Key Concepts/Skills To Be Assessed)	Level of Cognitive Demand	Item Type MC/SA/CR	No. of Items
Totals:				

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Test and test item quality

3

Construct - Irrelevant Factors

Mr. Zadervak's class is raising money for a field trip to Six Flags in **Agawam, Massachusetts**. They need a total of $165. They earned $87 at a yard sale **they had in October**.

How much money do they need to earn to pay for the trip in **March**?

(a) $78
(b) $82
(c) $88
(d) $122

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Construct - Irrelevant Factors

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How much money do they need to earn to pay for the trip in **March**?

(a) $78
(b) $82
(c) $88
(d) $122

Mr. Baker's class is raising money for a field trip to Six Flags. They need a total of $165. They earned $87 at a yard sale.

How much money do they need to earn to pay for the trip?

(a) $78
(b) $82
(c) $88
(d) $122

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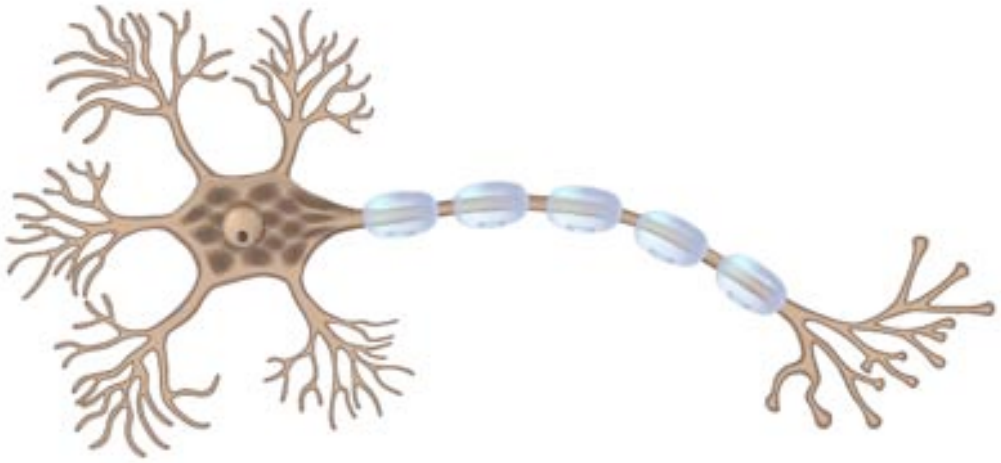

What is the function of a neuron?

(a) It takes oxygen to the cells.
(b) It secretes digestive enzymes.
(c) It cleanses the blood.
(d) It receives signals from the internal and external environments.

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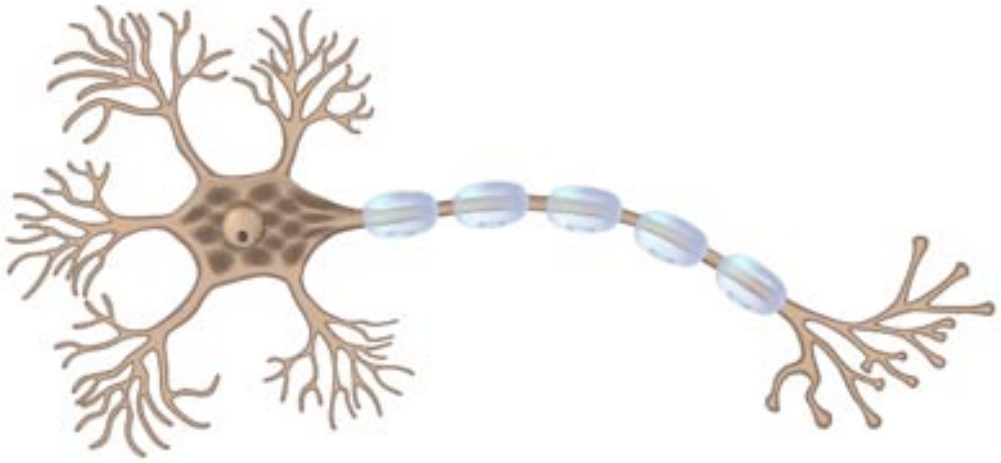

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Which of the following is a system of government in which the power to govern is shared between national and state governments?

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Which of the following is a system of government in which the power to govern is shared between national and state governments?

(a) democracy
(b) republic
(c) federalism
(d) National Football League

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Multiple Choice

Which of the following best characterizes a republic?

(a) majority rule either directly or through representatives
(b) rule according to law under a constitution
(c) authority shared between national and state levels
(d) government controlled by a single ruler

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Multiple Choice

Which of the following best characterizes a republic?

(a) majority rule either directly or through representatives
(b) rule according to law under a constitution
(c) authority shared between national and state levels
(d) government controlled by a single ruler

Open Ended

What is a republic?

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Multiple choice myth:

A multiple choice item should address a single skill or concept.

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Multiple choice myth:

A multiple choice item should address a single skill or concept.

Higher order thinking skills

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Sample Constructed Response Item

Dylan shaded part of this square green to represent a fraction.

Dylan explained that he shaded the square to represent the fraction ⅔, because he shaded 2 parts green out of a total of 3 parts.

What is the mistake in Dylan's explanation?

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3. Tests and Test Item Quality

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You would have divided the square into equal parts, but think again about what fraction it would show.

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3. Tests and Test Item Quality

Compare the relative motions of molecules in these three states of matter:

States of Matter

Solid	Liquid	Gas

Also explain how the molecular motion of each affects shape and volume of the substance.

Score	Description
4	Response demonstrates thorough understanding by accurately describes the relative speeds of molecules of the three states and the characteristics of shape and volume of all three.
3	Response demonstrates general understanding by describing relative speeds of molecules and most characteristics of shape and volume.
2	Response demonstrates partial understanding by comparing speeds of molecules only or by describing approximately half of the motions and volume/shape characteristics.
1	Response shows minimal understanding by general statement about relative speed of molecules or about shape or volume OR by providing minimal motion, volume, or shape information.
0	Response is totally incorrect, irrelevant, or blank.

Scorer Notes:

- Solid: slowest molecular motion, fixed volume and shape
- Liquid: speed of motion in between others, fixed volume, adapts to shape of container
- Gas: fastest molecular motion, expands to fit available space

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Scaffolding

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Scaffolding

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Carefully evaluate assessment items

Measured Progress ©2012

Carefully evaluate assessment items

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Promoting teacher training for creating and using effective classroom assessments

4

Michigan

Measured Progress ©2012

Michigan

Wayne County

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Michigan

Wayne County

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4. Promoting teacher training for effective classroom assessments

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Assessment Literacy

"The knowledge about assessing what students know and can do, how to interpret the results from these assessments, and how to apply these results to improve student learning and program effectiveness."
—Webb

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4. Promoting teacher training for effective classroom assessments

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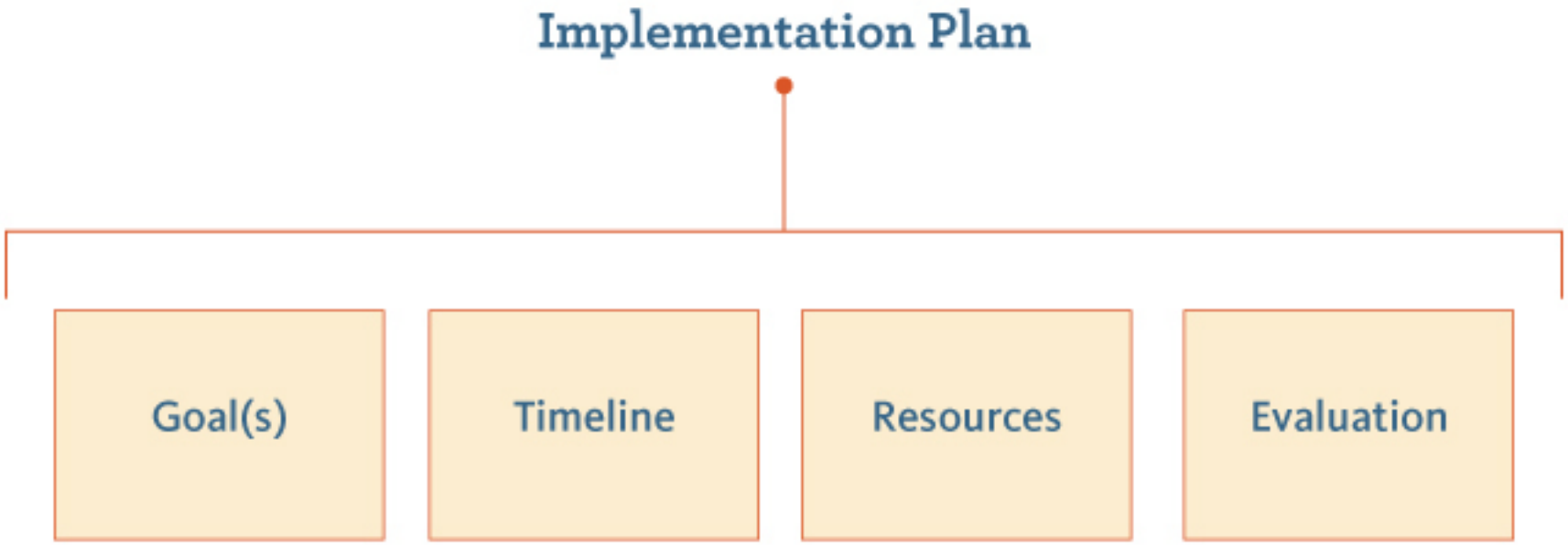
4. Promoting teacher training for effective classroom assessments



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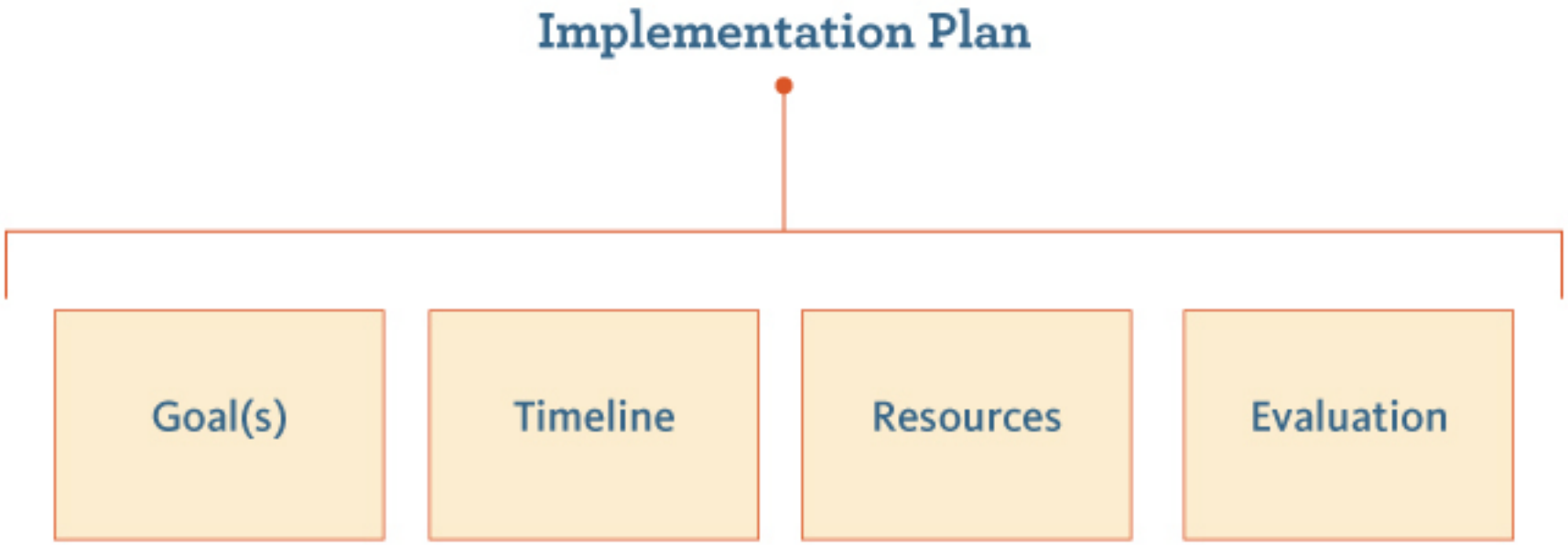

Developing Effective Assessments

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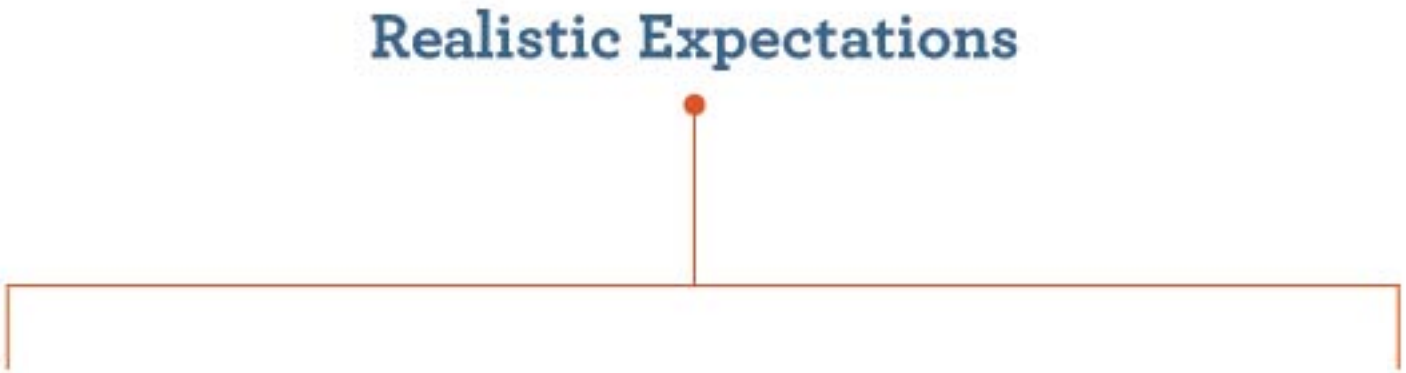
4. Promoting teacher training for effective classroom assessments



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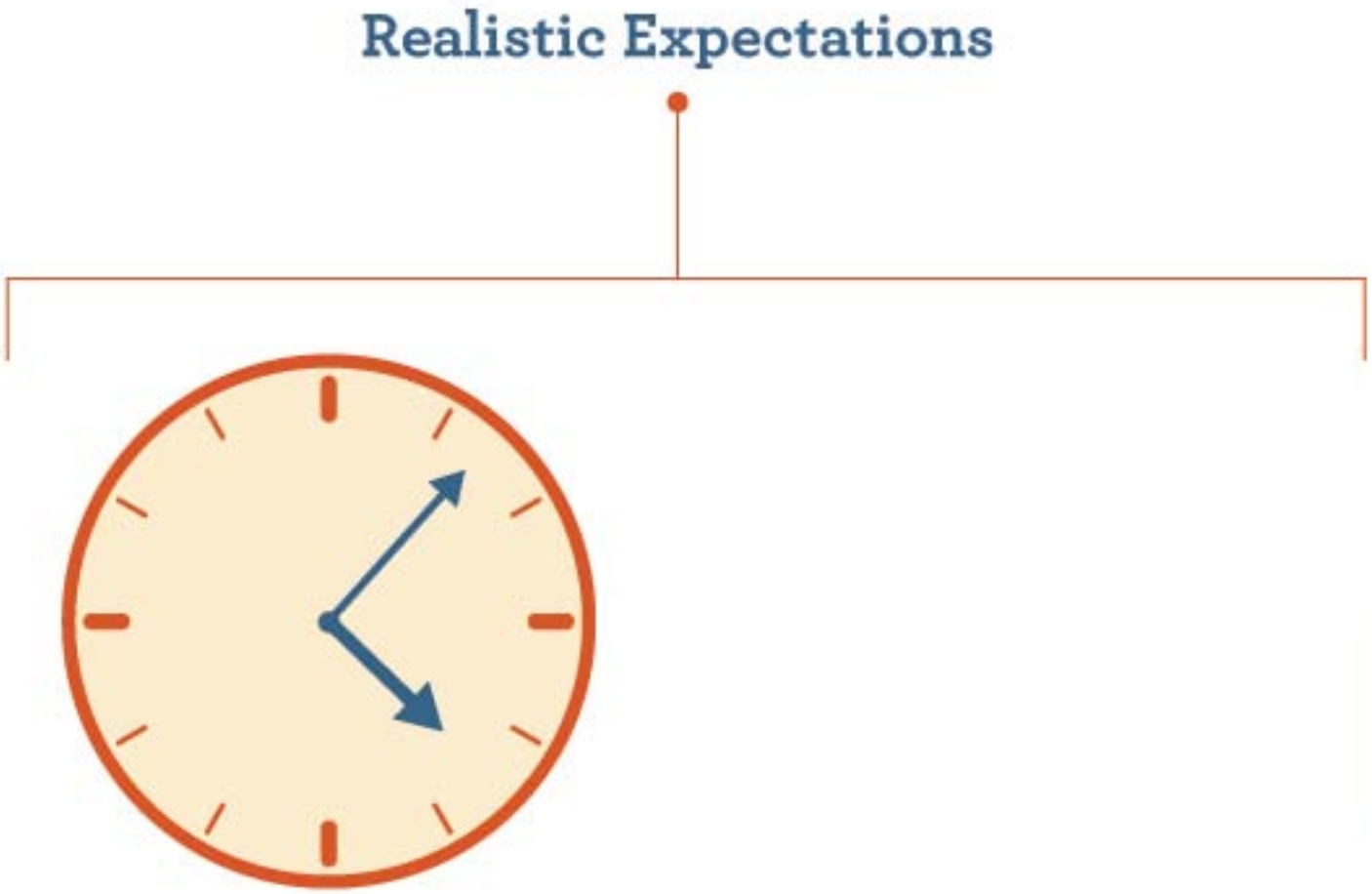
4. Promoting teacher training for effective classroom assessments



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4. Promoting teacher training for effective classroom assessments

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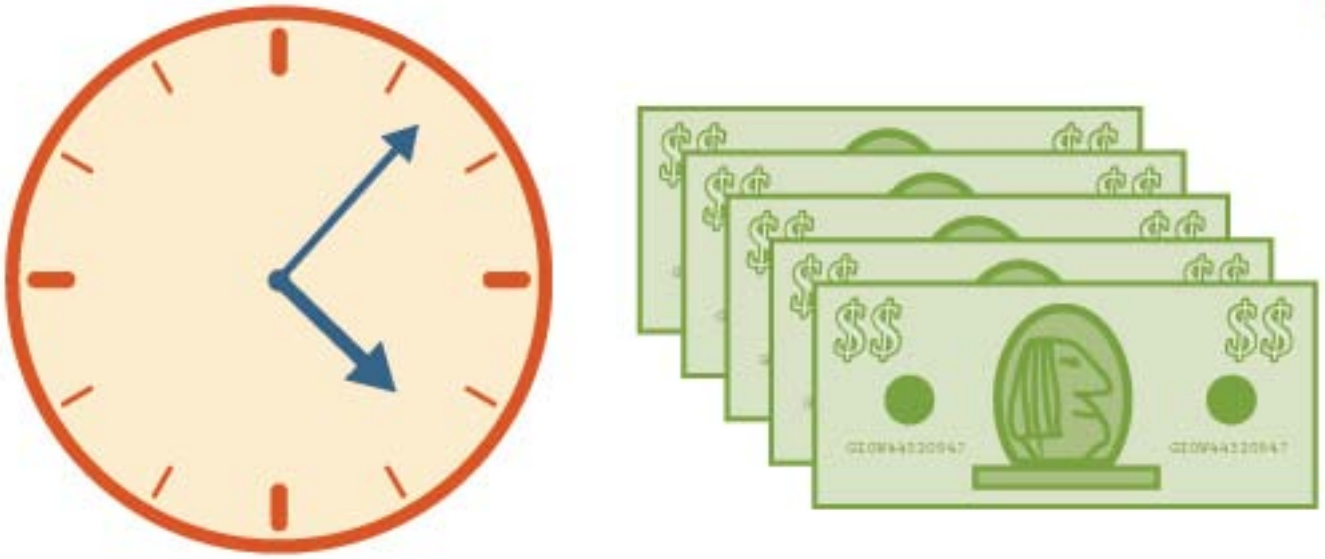
Realistic Expectations



Success!

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Administrator Support

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4. Promoting teacher training for effective classroom assessments

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4. Promoting teacher training for effective classroom assessments

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4. Promoting teacher training for effective classroom assessments

Proficiency Over Standards Analysis

Roll-up

Included Test	Subject	
Math 5th Grade Formative 3 Topics 7 and 8	Math	1

Advanced/Above Prof (90%)
Proficient (70%)*
Needs Improvement (50%)
Warning/Failing (0%)

Student (Total Score/Overall %)	Measurement & Geometry 2.1	Measurement & Geometry 2.2	Number Sense 1.1	Number Sense 2.1	Number Sense 2.2
Item Count/Points Possible -->	5/5	5/5	1/1	6/6	1/1
Alexander, Doris (13 / 72.2%)					
Anderson, Abel (13 / 72.2%)					
Blackwell, Reuben (11 / 61.1%)					
Campos, Gesualdo (7 / 38.9%)					
Dominguez, Abancuy (11 / 61.1%)					
Gaitan, Modesto (11 / 61.1%)					
Galindo, Manon (10 / 55.6%)					
Haugen, Brittany (6 / 33.3%)					
Hildebrand, John (11 / 61.1%)					
Jackson, Everett (9 / 50.0%)					
Jiminez, Galileo (8 / 44.4%)					
Luna, Bru (13 / 72.2%)					

This report shows the student's proficiency on a given standard.

Student Is Current is equal to Yes and Teacher - Any Period is equal to 661

Results Over Standards

Roll-up Level: Standard Proficiency: 70%

Included Test	Subject	Test Date	Test Grade	Average Score	
Math 5th Grade Summative Tri1	Math	10/11/2010	05	21.37 / 35	61.1%

Standard	Number Proficient	
Number Sense 1.1	29	25 (46%) / 29 (54%)
1.1 Estimate, round, and manipulate very large (e.g., millions) and very small (e.g., thousandths) numbers.		
Number Sense 1.3	39	15 (28%) / 39 (72%)
1.3 Understand and compute positive integer powers of nonnegative integers; compute examples as repeated multiplication.		
Number Sense 2.1	15	39 (72%) / 15 (28%)
2.1 Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers from negative integers; and verify the reasonableness of the results.		

Math 6th Grade Cumulative 2 Topics 8 to13 and 15 2011 12

Item Analysis - Distribution Summary

Test Date 1/26/2012 Subject Math
Student Count: 1034 Grade 06

Correct Response
Most Common Incorrect Response

Questions 1 to 22 (of 35)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Standard	Number Sense 1.1	Number Sense 1.1	Number Sense 1.1	Number Sense 2.2	Number Sense 2.1	Number Sense 2.4	Number Sense 2.4	Number Sense 2.4	Number Sense 2.4	Algebra & Functions 1.1	Algebra & Functions 1.1	Algebra & Functions 1.1	Algebra & Functions 1.1	Algebra & Functions 1.1	Algebra & Functions 1.1	Algebra & Functions 2.3	Algebra & Functions 2.2	Algebra & Functions 2.2	Algebra & Functions 2.2	Algebra & Functions 2.2	Algebra & Functions 2.2	Algebra & Functions 2.2
Correct Response %	78%	35%	78%	60%	81%	77%	66%	68%	75%	72%	93%	91%	86%	89%	71%	80%	86%	68%	80%	86%	81%	45%
Total Points Poss = 35	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Correct Response	B	B	D	D	D	D	B	B	A	D	A	B	D	D	A	D	C	A	B	C	C	B
Selected A	5%	24%	9%	32%	9%	4%	9%	5%	75%	23%	93%	2%	4%	2%	71%	8%	4%	68%	5%	6%	6%	13%
Selected B	78%	35%	3%	2%	3%	11%	66%	68%	10%	3%	1%	91%	6%	2%	17%	7%	5%	16%	80%	6%	6%	45%
Selected C	12%	37%	10%	7%	7%	8%	6%	12%	8%	3%	2%	3%	3%	7%	5%	5%	86%	9%	9%	86%	81%	12%
Selected D	6%	5%	78%	60%	81%	77%	19%	15%	7%	72%	4%	5%	86%	89%	7%	80%	5%	7%	6%	2%	7%	29%
Selected E																						
No Response																						

Students Who Took Both Tests

Print Add to Dashboard

MCAS Math Scaled 5/1/2009	MCAS Math Scaled 5/1/2010 Warning/Failing	Needs Improvement	Proficient	Advanced/Above Prof	Totals
Advanced/Above Prof		6 0.2 %	37 1.0 %	37 1.0 %	80 2.2 %
Proficient	33 0.9 %	341 9.3 %	378 10.3 %	69 1.9 %	821 22.3 %
Needs Improvement	431 11.7 %	1446 39.3 %	195 5.3 %	3 0.1 %	2075 56.3 %
Warning/Failing	476 12.9 %	229 6.2 %	2 0.1 %		707 19.2 %
Totals	940 25.5 %	2022 54.9 %	612 16.6 %	109 3.0 %	3683 100.0 %

	5 Students increased more than one level	0.1 %
	493 Students increased one level	13.4 %
	809 Students decreased one level	22.0 %
	39 Students decreased more than one level	1.1 %
	2337 Students scored the same level	63.5 %
	3683 Total students	100.0 %

Roster: Roster: 1/31/2011 3:03:40 AM (Current)
Student Set: Student Is Current is equal to Yes

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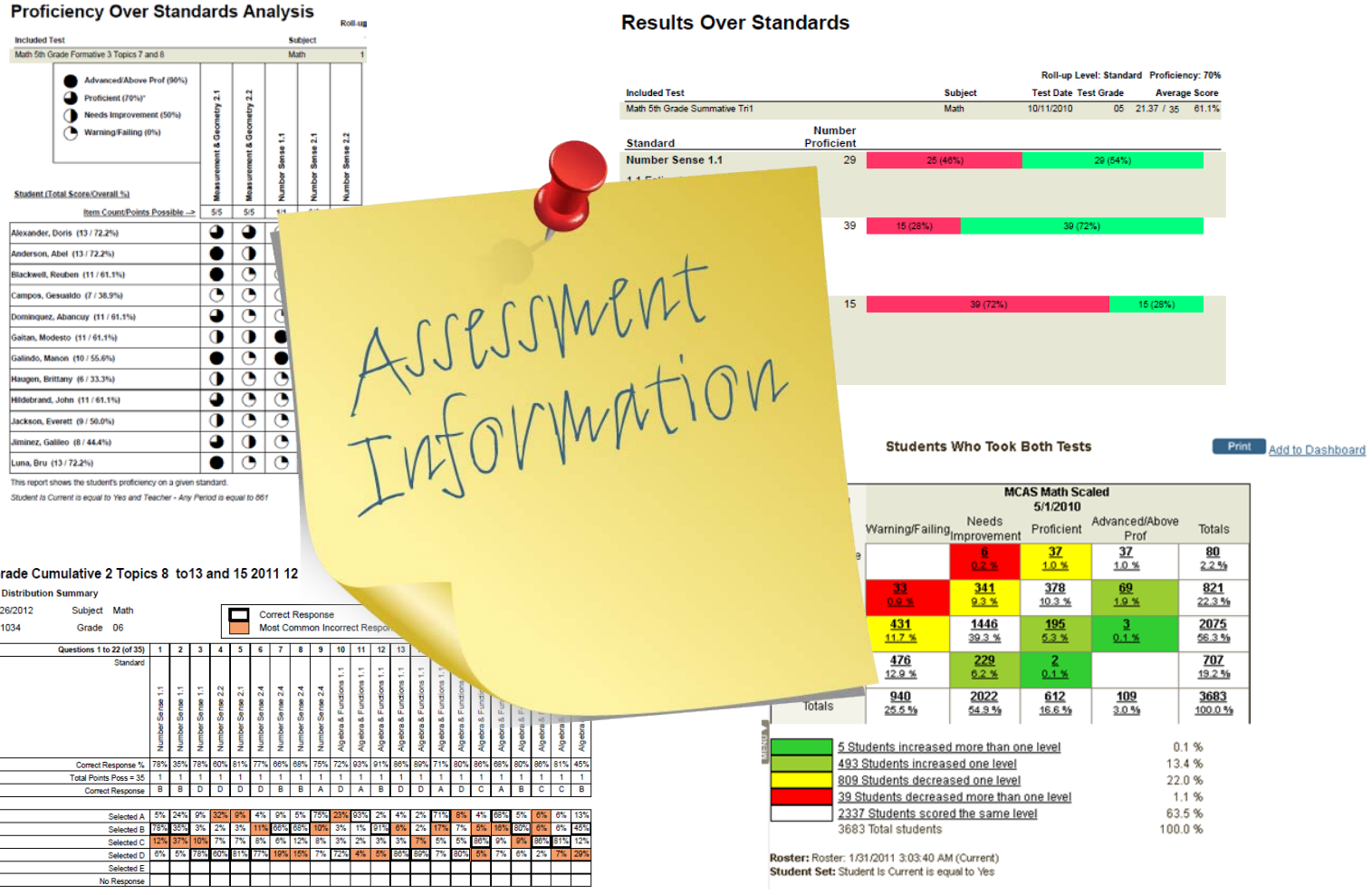
4. Promoting teacher training for effective classroom assessments



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4. Promoting teacher training for effective classroom assessments

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"The purpose of assessment is to become your own assessor."

Howard Gardner

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Requires Ongoing Collaboration

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Learning Teams

Elementary School: Grade specific

Middle and High School: Content or course specific

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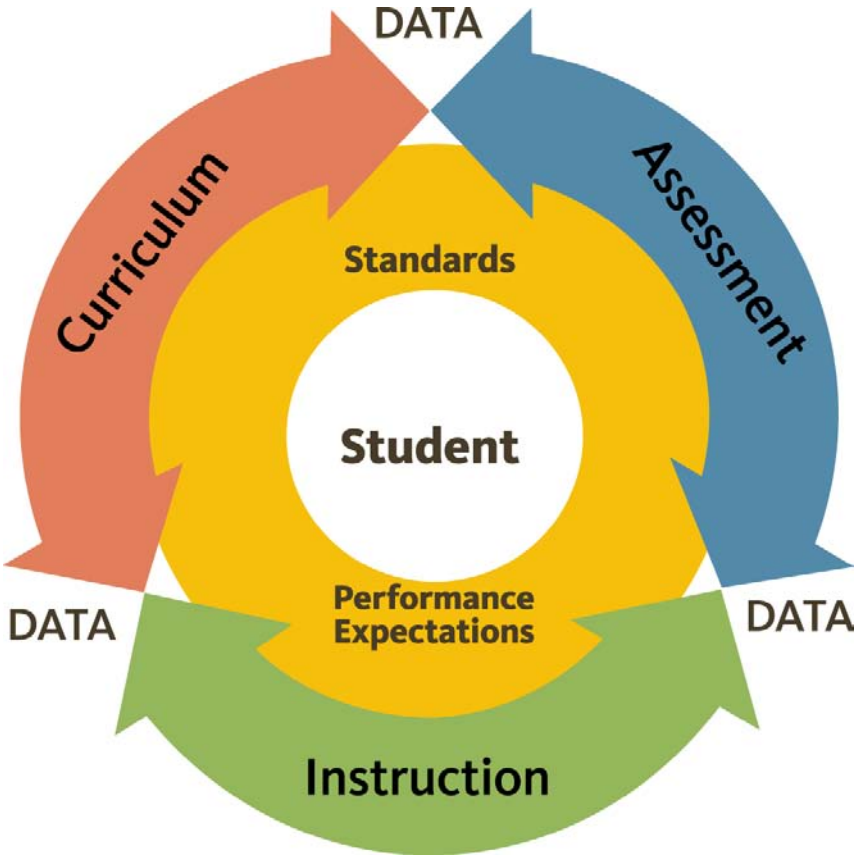
Teaching and Learning Cycle



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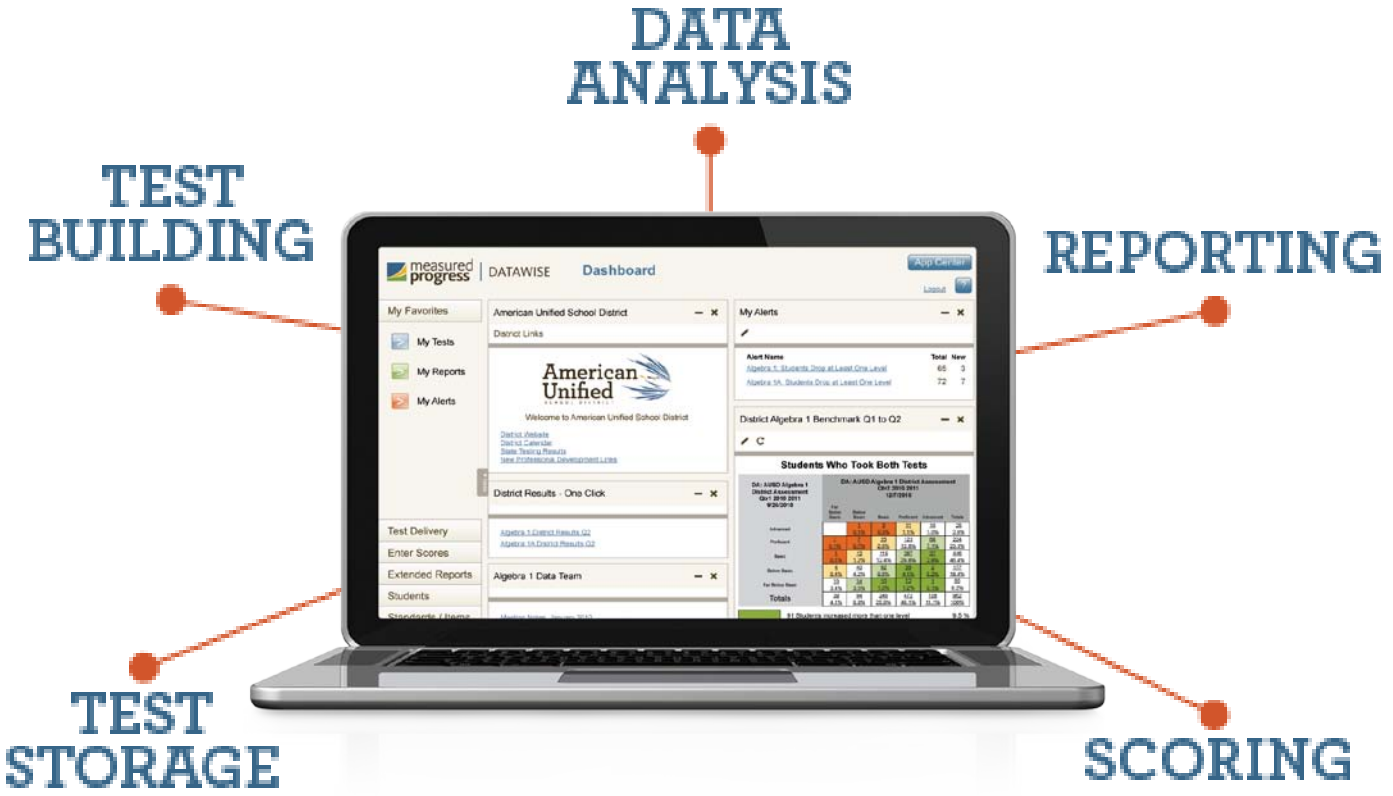

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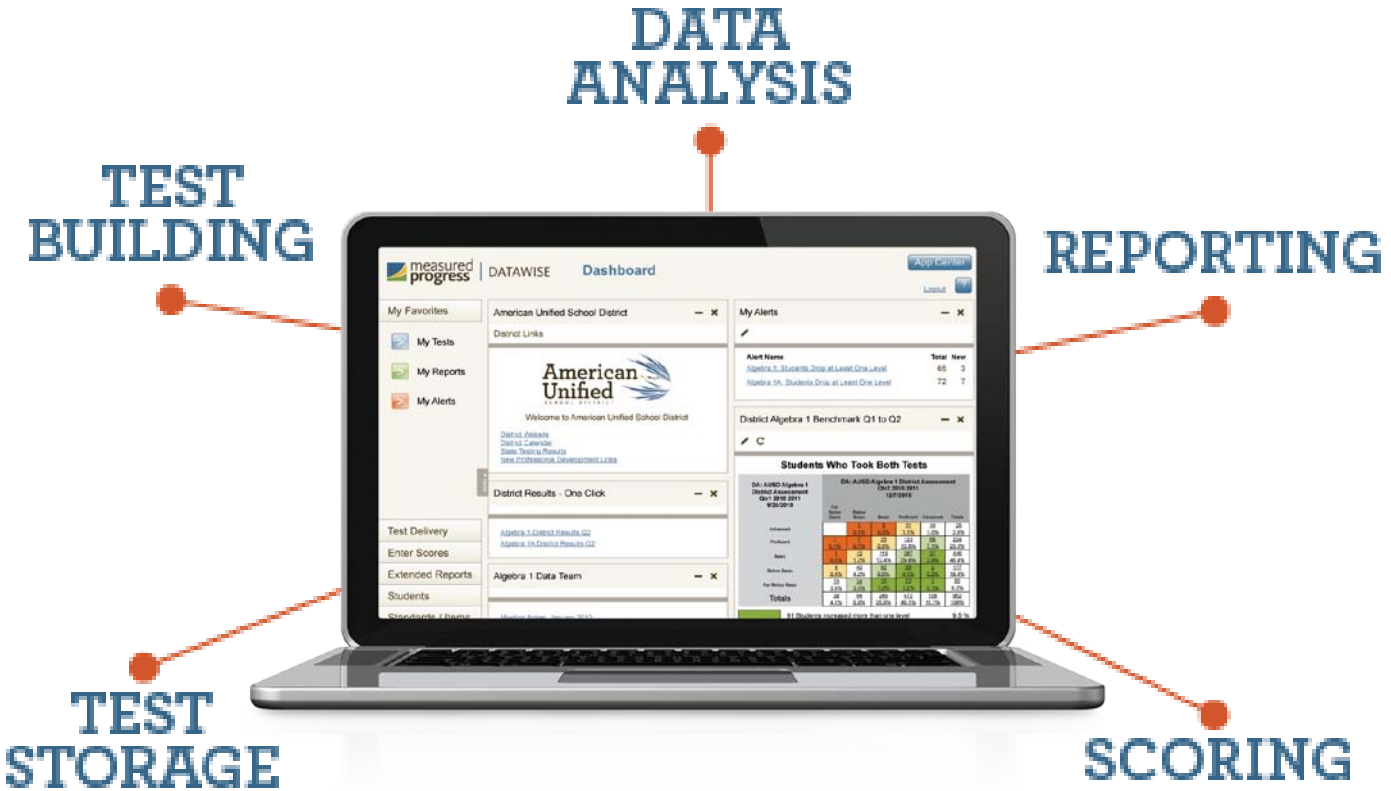
4. Promoting teacher training for effective classroom assessments



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TRAINING NEEDS

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4. Promoting teacher training for effective classroom assessments

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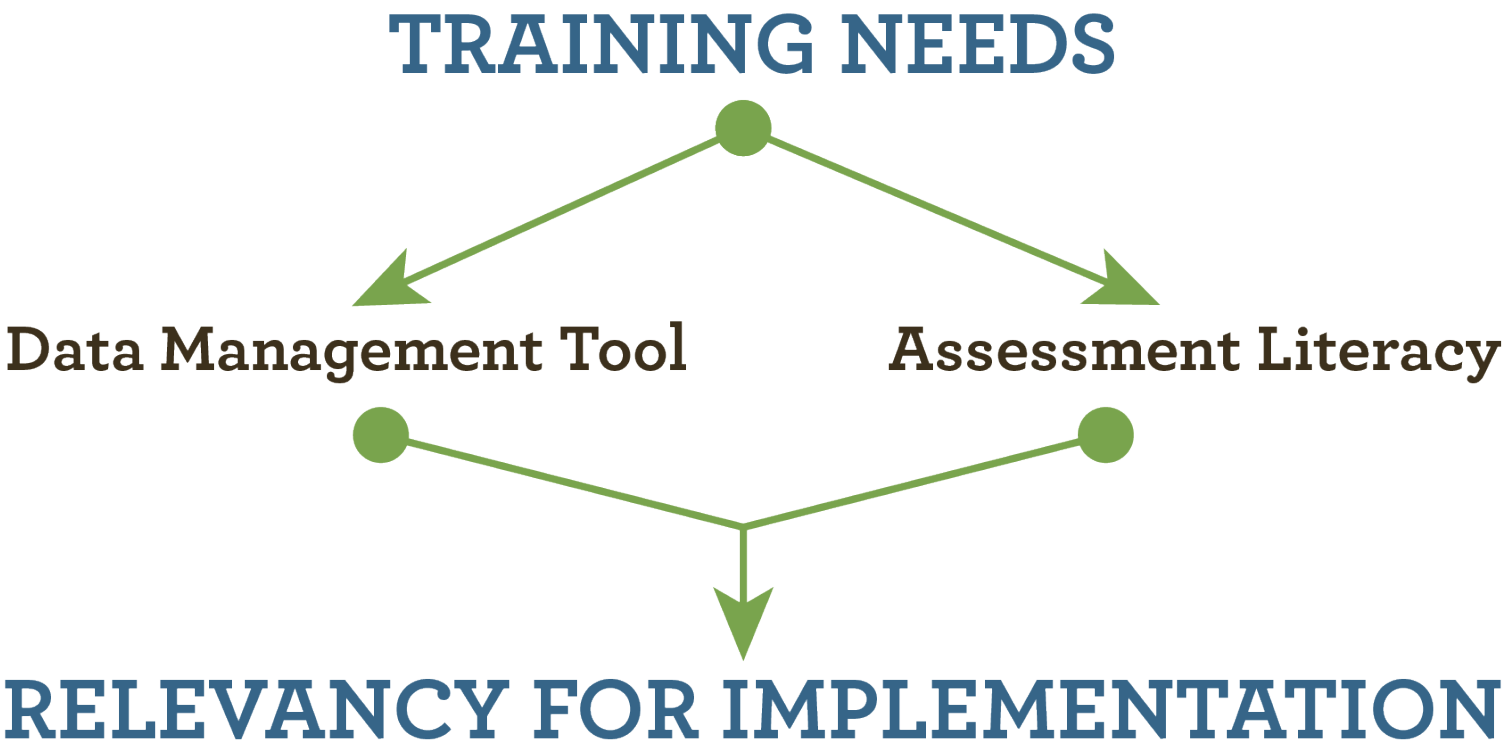
4. Promoting teacher training for effective classroom assessments



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Build Teacher Capacity

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Build Teacher Capacity

- Enhance assessment literacy skills
- Ensure quality of classroom assessments
- Increase validity of data
- Improve teacher efficacy and student achievement

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4. Promoting teacher training for effective classroom assessments

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Good tests are reliable and valid.

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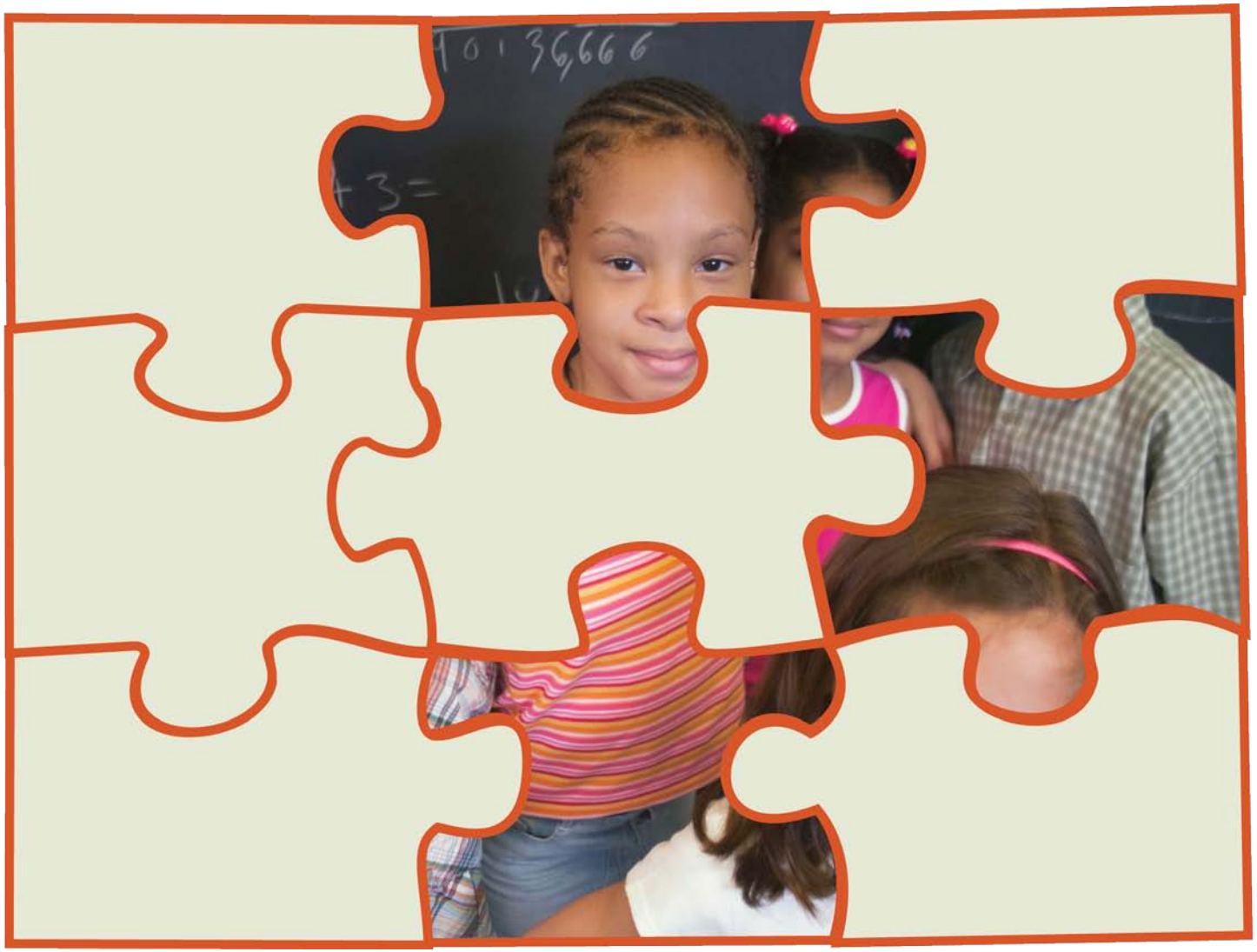
4. Promoting teacher training for effective classroom assessments



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4. Promoting teacher training for effective classroom assessments

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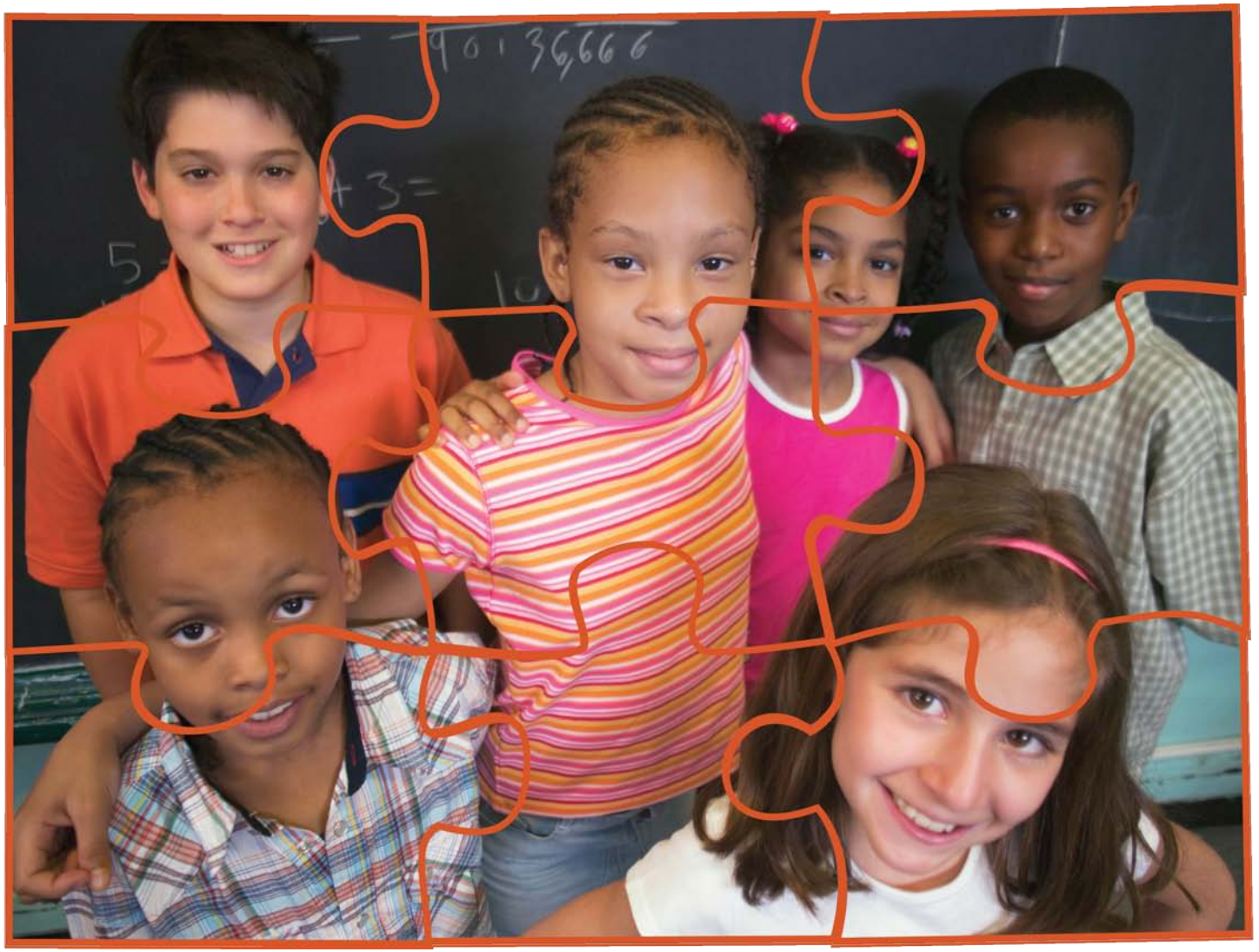

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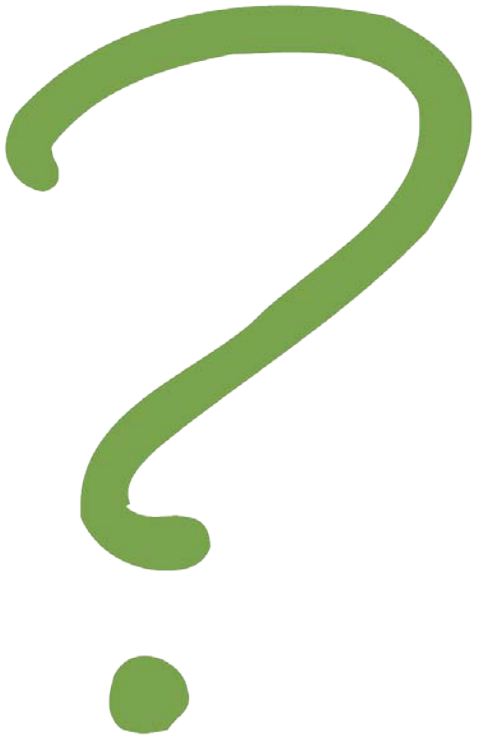

Q&A

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Thank you!

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