

RIT 101

Understanding How MAP Growth Works—and Why It Matters



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MAP Growth

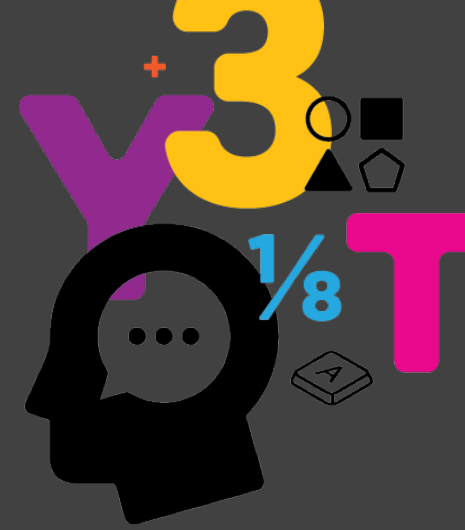
- + Computer-adaptive interim assessments
 - K-12
 - Reading, Language Usage, Mathematics, Science
- + Grade-level independent
- + Administered 3-4 throughout the year
- + 45-60 minutes; RIT scores available immediately



The Goal of MAP Growth

- + To provide educators with **precise, accurate** data so that you can:
 - Take action with students
 - Measure growth over time
 - See students in context

The foundation of **the RIT scale** makes this possible.



How do we ensure we're getting good data?

- + Meet kids where they are
- + Effectively match the right items to the right students

Let's talk about what **the RIT scale** is and why it's especially suited for this.



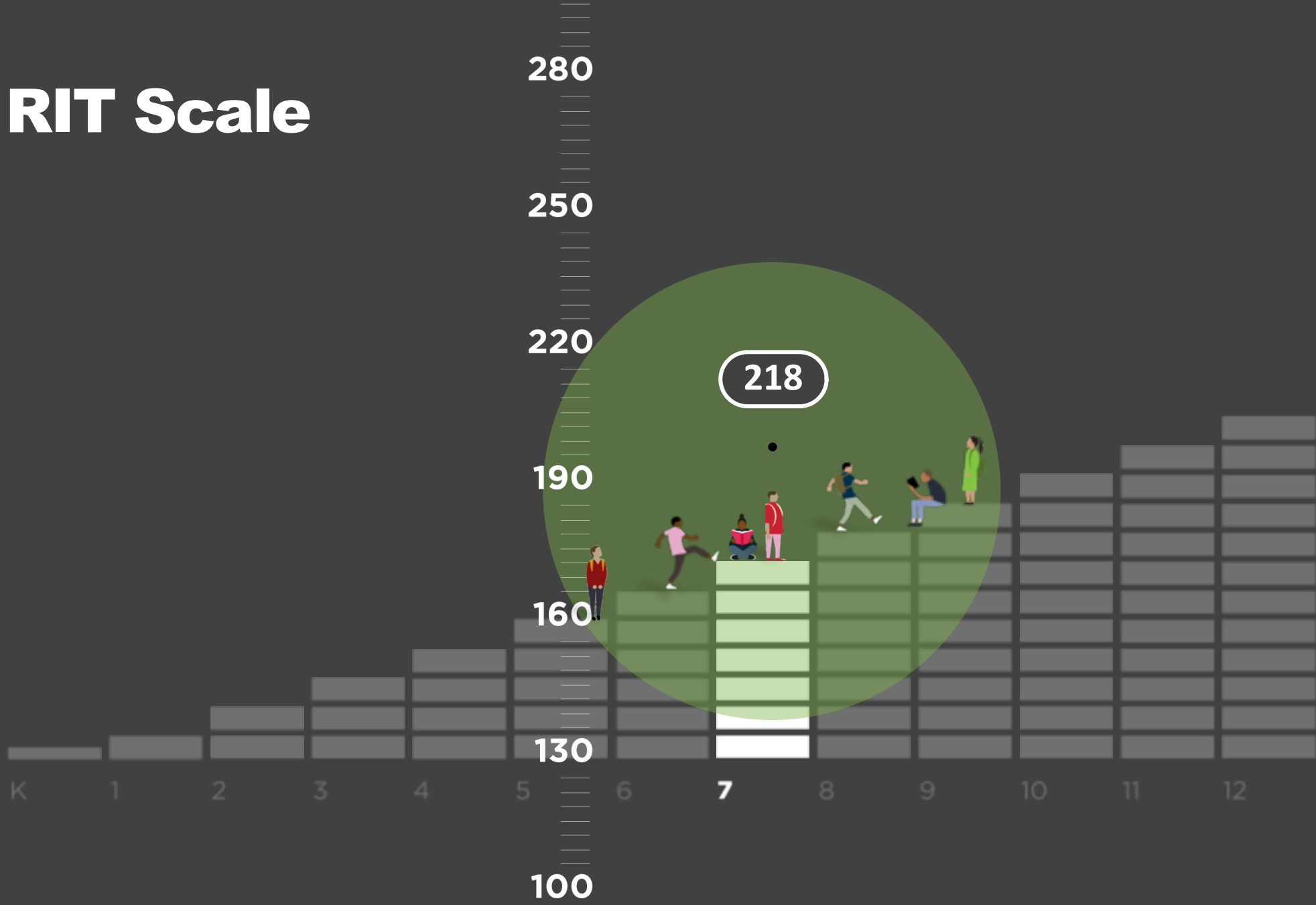
Question to ponder...

What proportion of your students would you estimate are achieving on “grade level”?

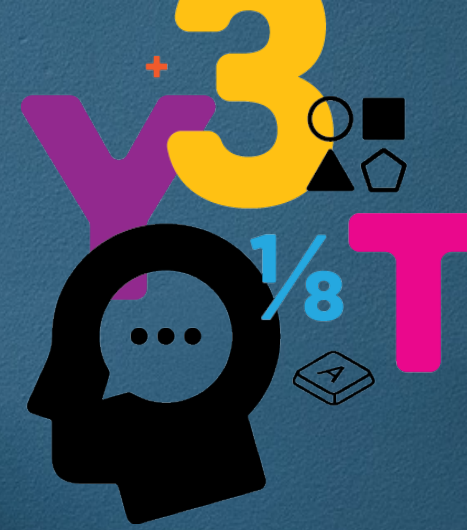
- + 0%
- + 1-35%
- + 36-69%
- + 70-99%
- + 100%



The RIT Scale



1. How the RIT scales enables **accurate** and **precise** measurement



The keys to sound measurement

To ensure accuracy and precision,
an assessment must:

+ Have test items that have been field-tested and been well calibrated

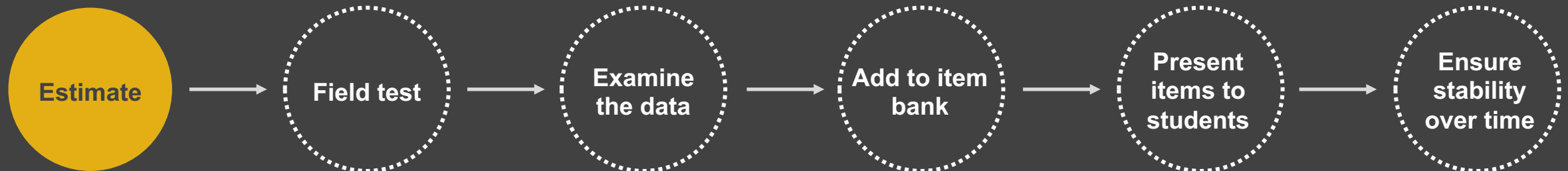
+ Be able to efficiently match students with the right test items



The item development and testing cycle

Provisional difficulty estimates:

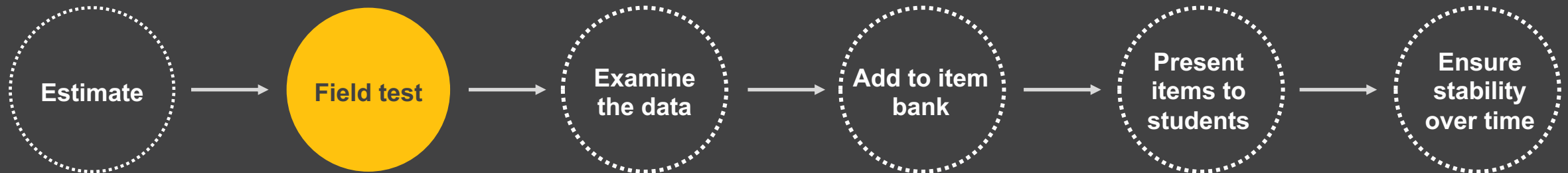
+ Initial estimate of item difficulty



The item development and testing cycle

Field testing:

- + 1-3 field items per test
- + Doesn't count towards student score
- + Seamless for students

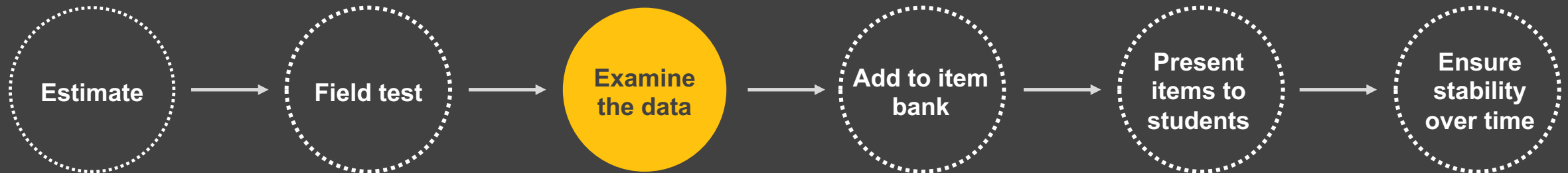


The item development and testing cycle

Examining the relationship between:

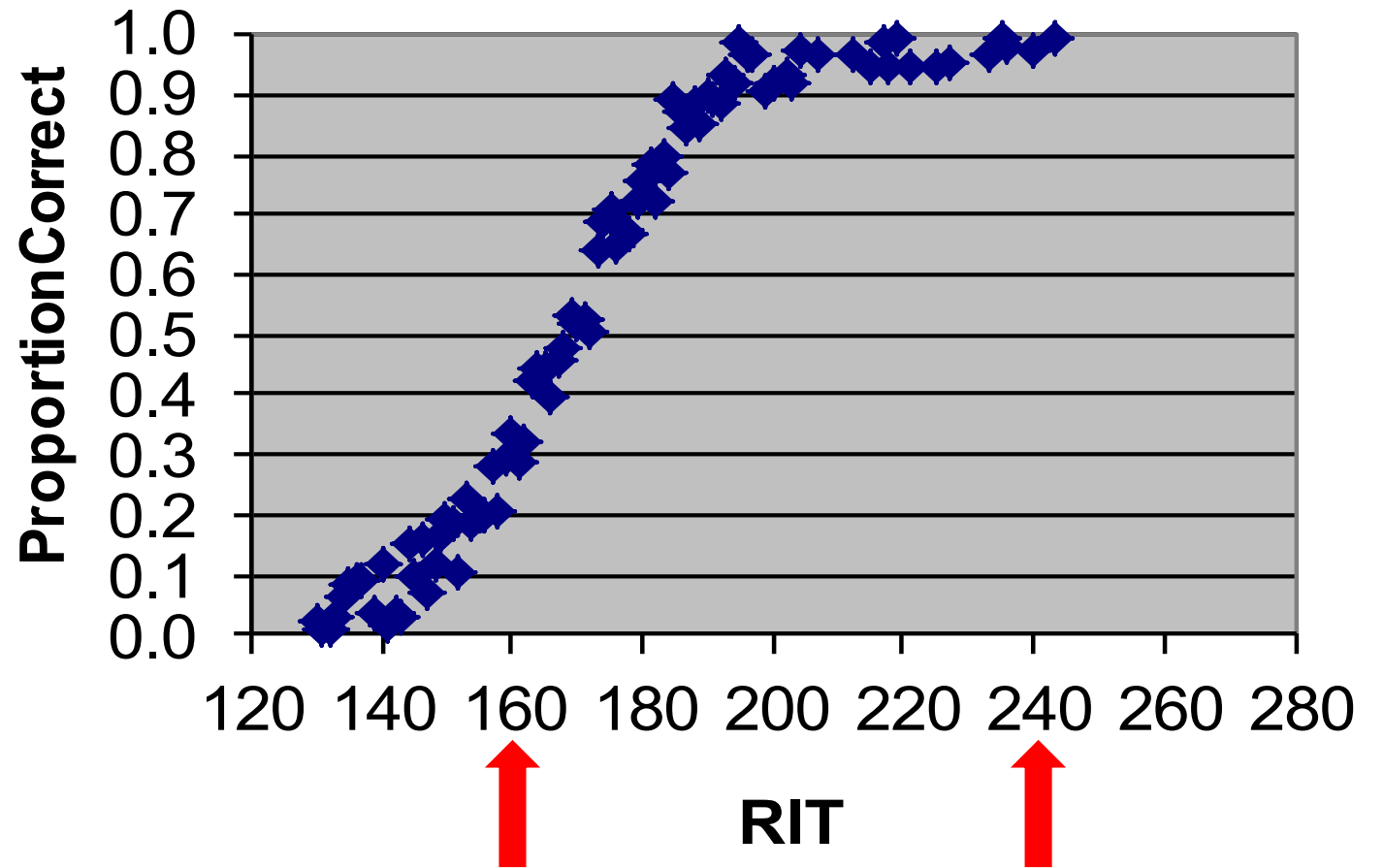
+ Student achievement level

+ Proportion of students who answered correctly



A Basic Math Item: $10 \times 10 = ?$

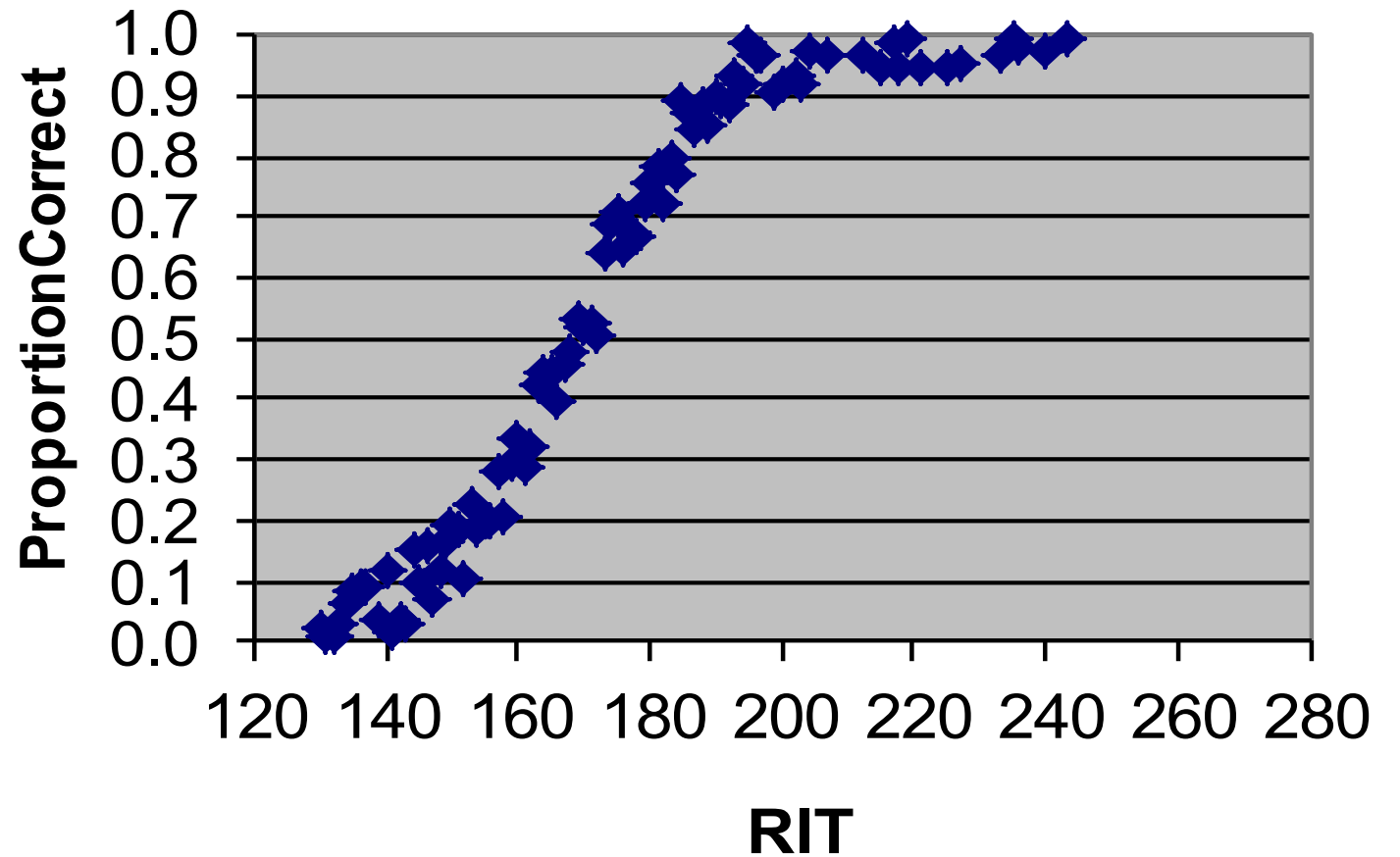
How do we figure out
the difficulty level of
this item?



Question to ponder....

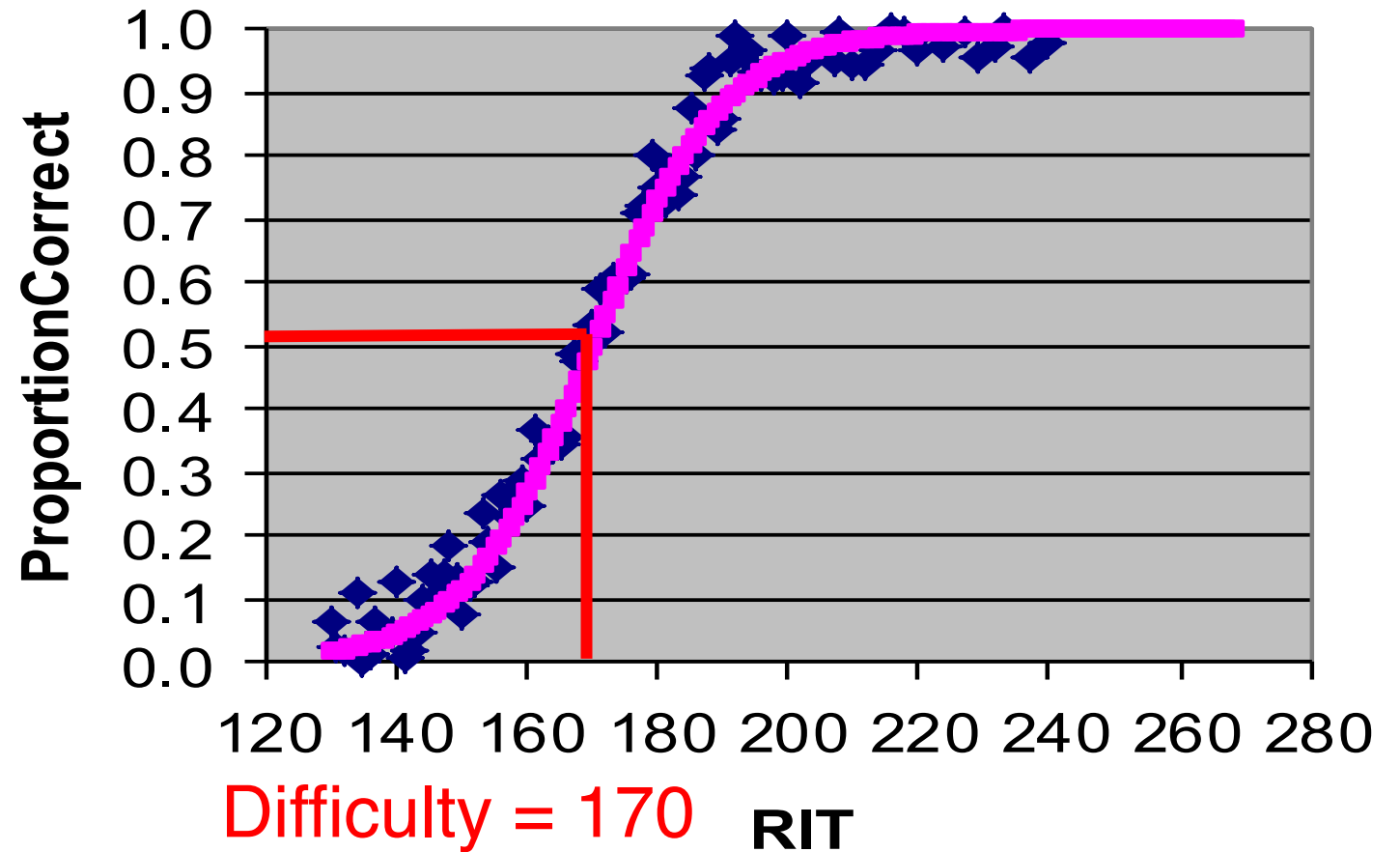
What is the RIT of this item?

- 160
- 170
- 190
- 200



Item Difficulty

- + The RIT value at which we expect half of the students will answer correctly.



Question to ponder...

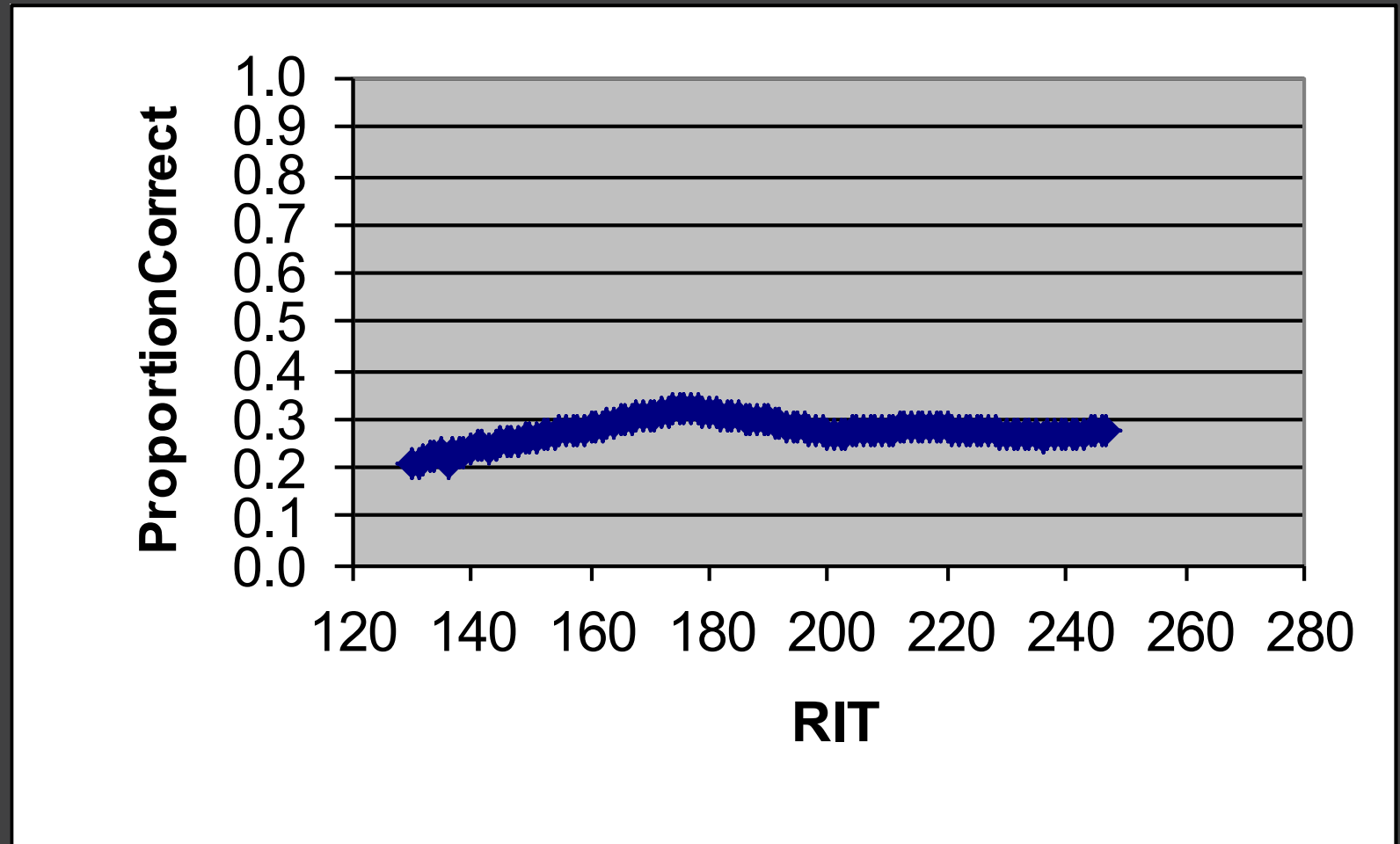
+ What is the RIT of this item?

➤ 160

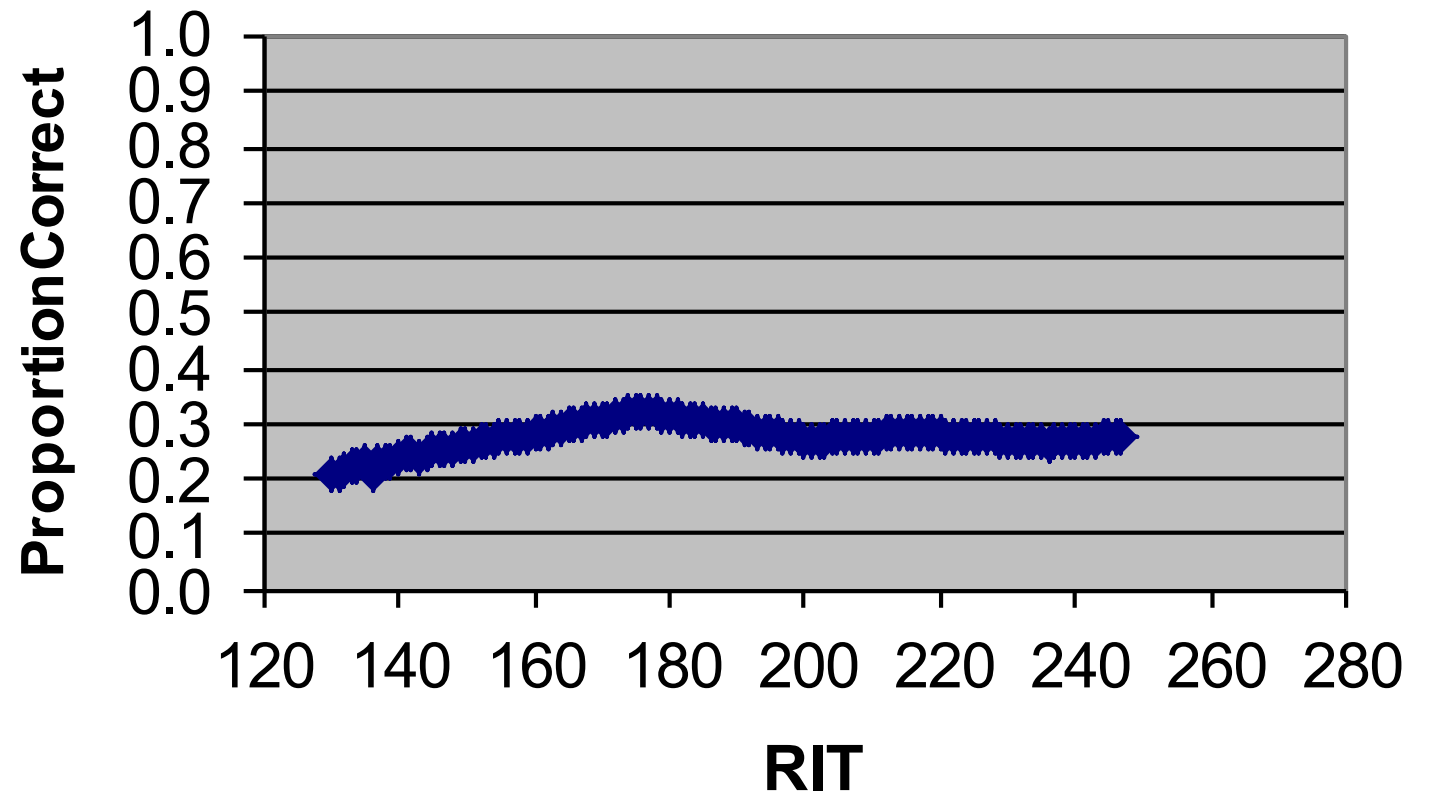
➤ 180

➤ 200

➤ ???



We can also identify problematic items



The item development and testing cycle

The Item Bank:

- + Includes ~40K items
- + Provides ample coverage for all students
- + Works around a 14-month exposure rule

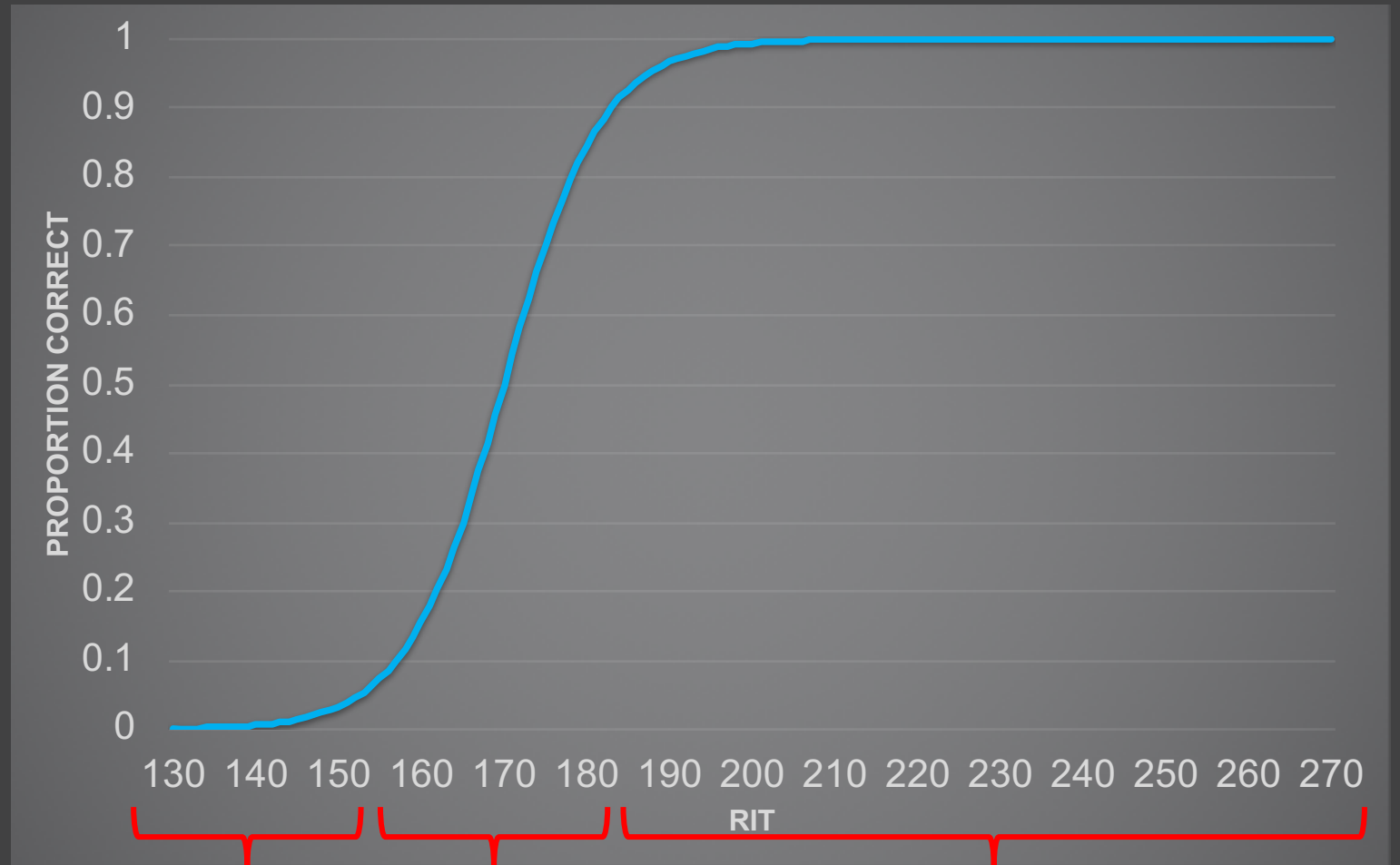


The item development and testing cycle



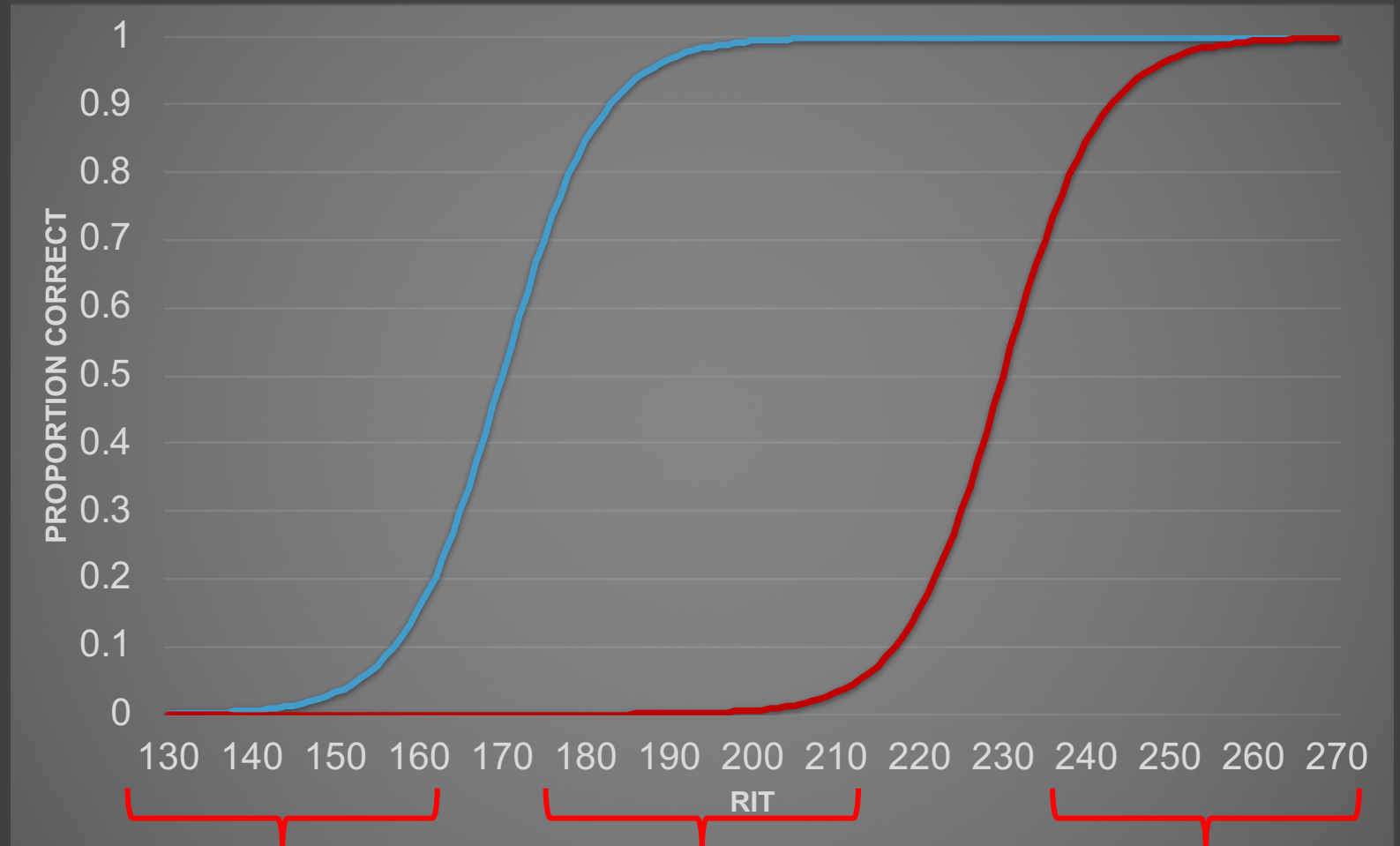
A One-Item Test

Ideally, to which students should this item be administered?



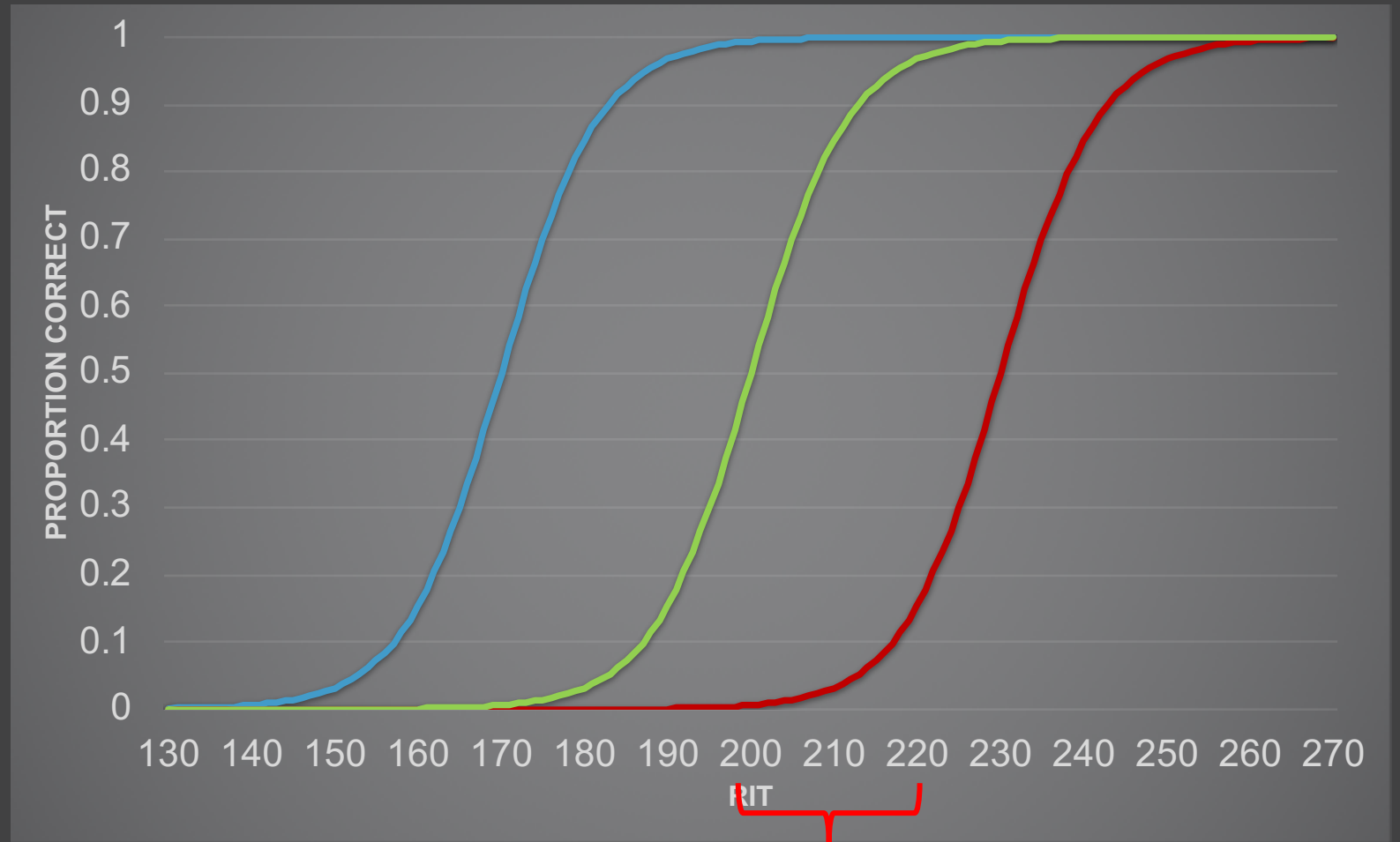
A Two-Item Test

- + What is the difficulty of the **Red** item?
- + What if the **Blue** item was correct and the **Red** item was incorrect?



A Three-Item Test

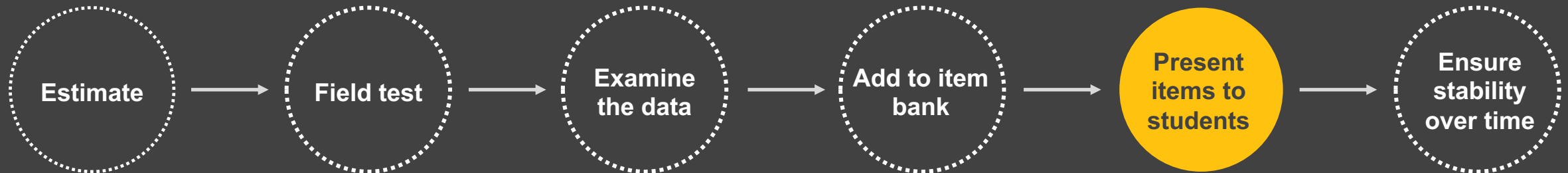
- + What is the difficulty of the **Green** item?
- + What if the **Blue** and **Green** items were correct and the **Red** item was incorrect?



The item development and testing cycle

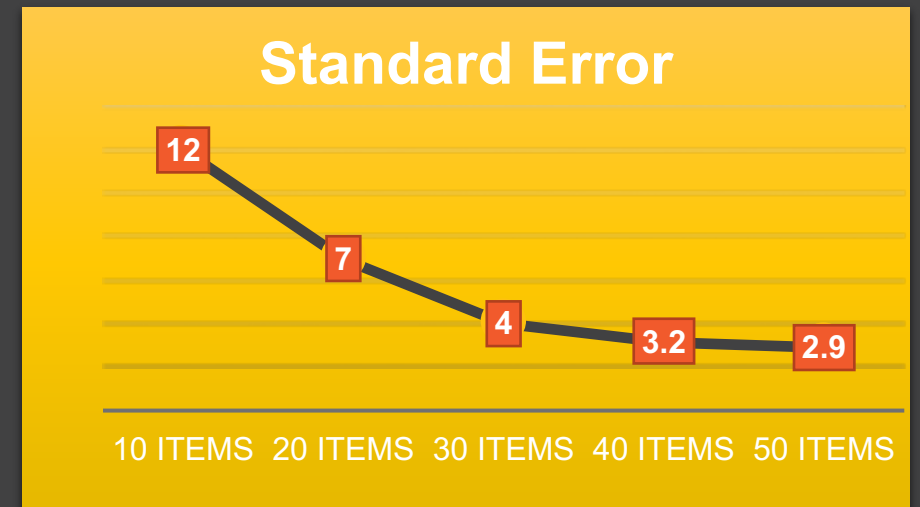
But where does the test start?

- + Initially: average difficulty per grade or subject
- + Where they left off previously



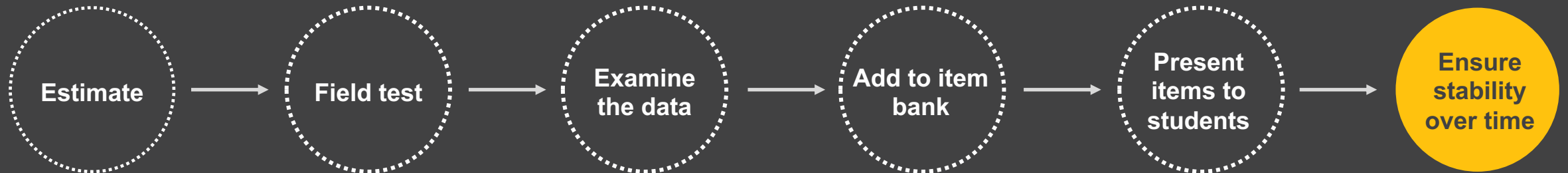
Number of items

- + The goal: **maximize** what we know about each student **as efficiently as possible**.



The item development and testing cycle

- + Is a 170 RIT item still a 170 RIT item over time?
- + Has the content gotten any easier or harder for kids?

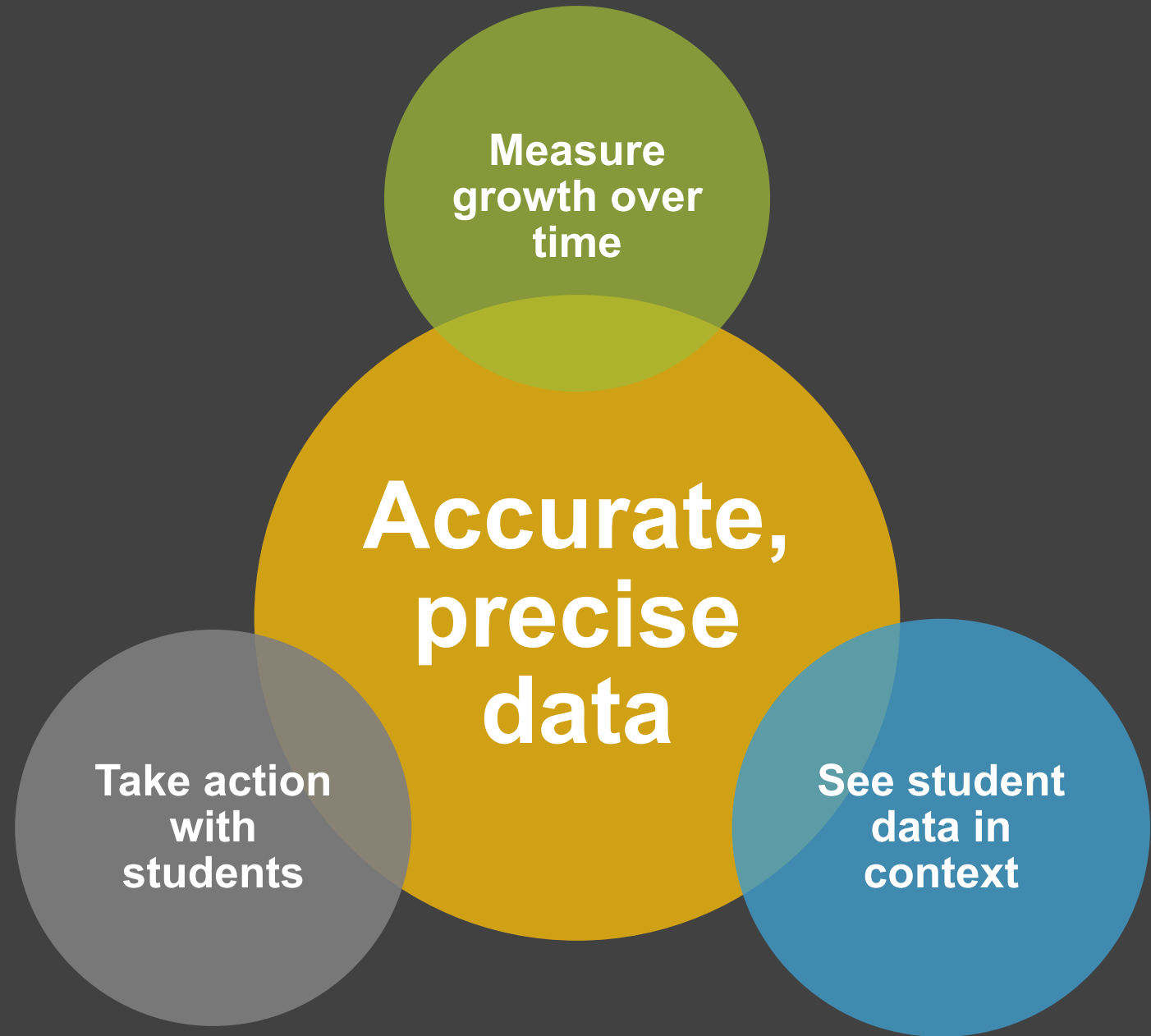


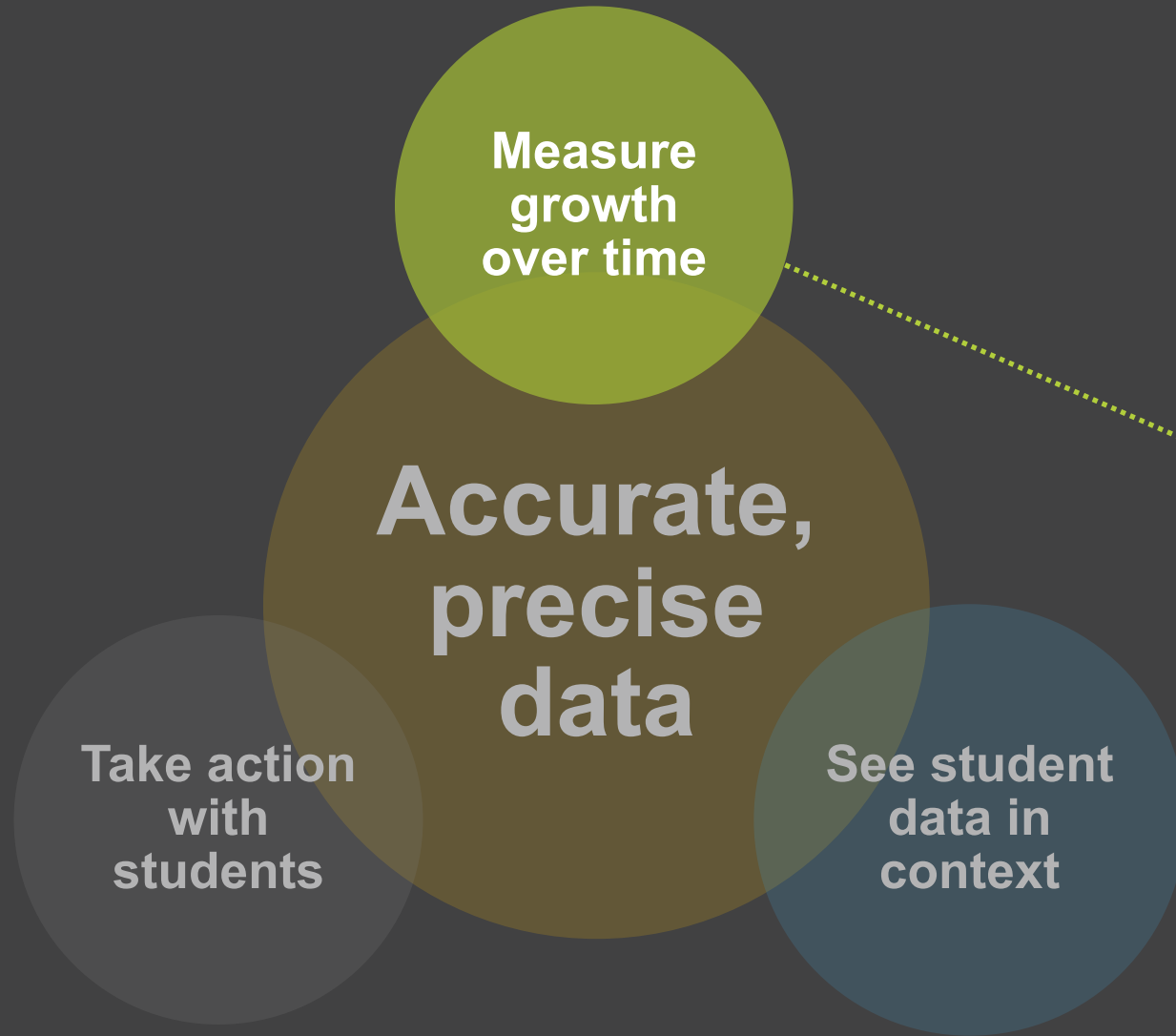


2. How the RIT scale enables **action** based on **quality data**



Enabling
action based
on **quality data**



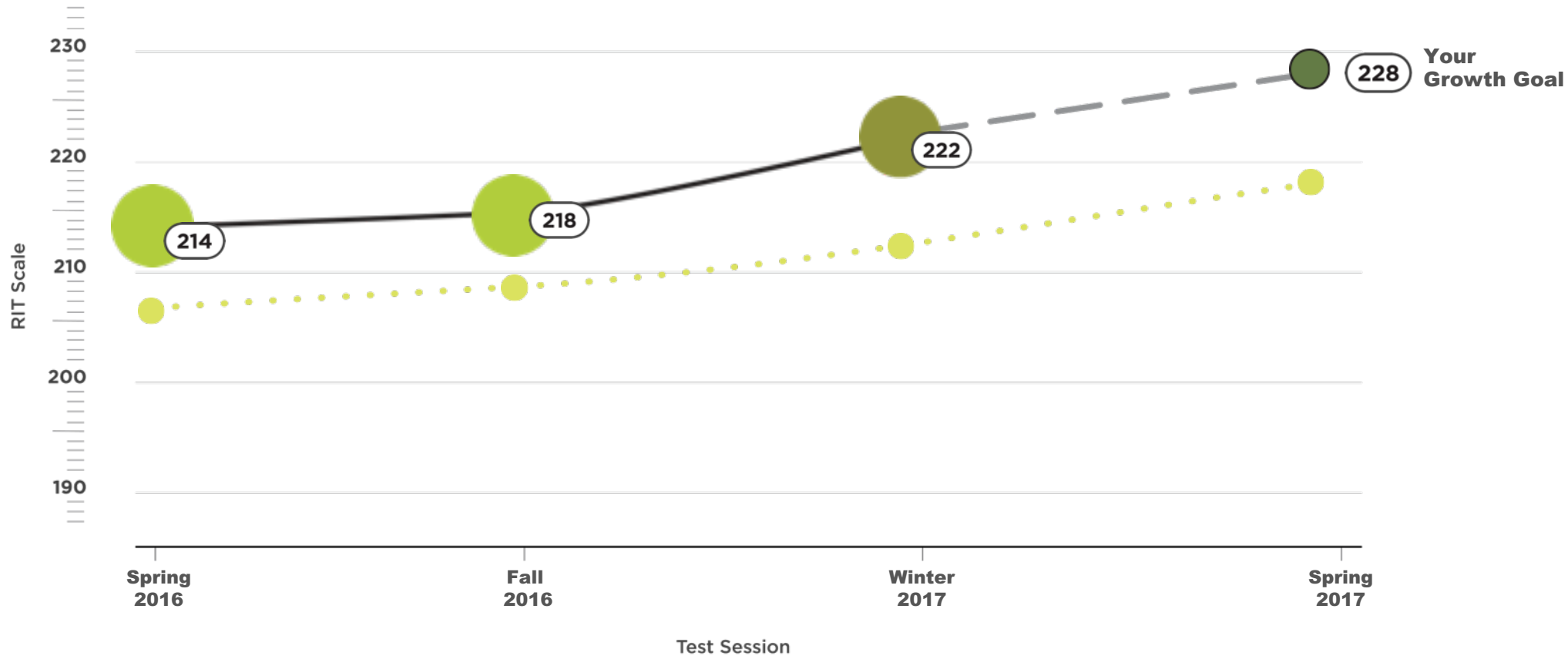


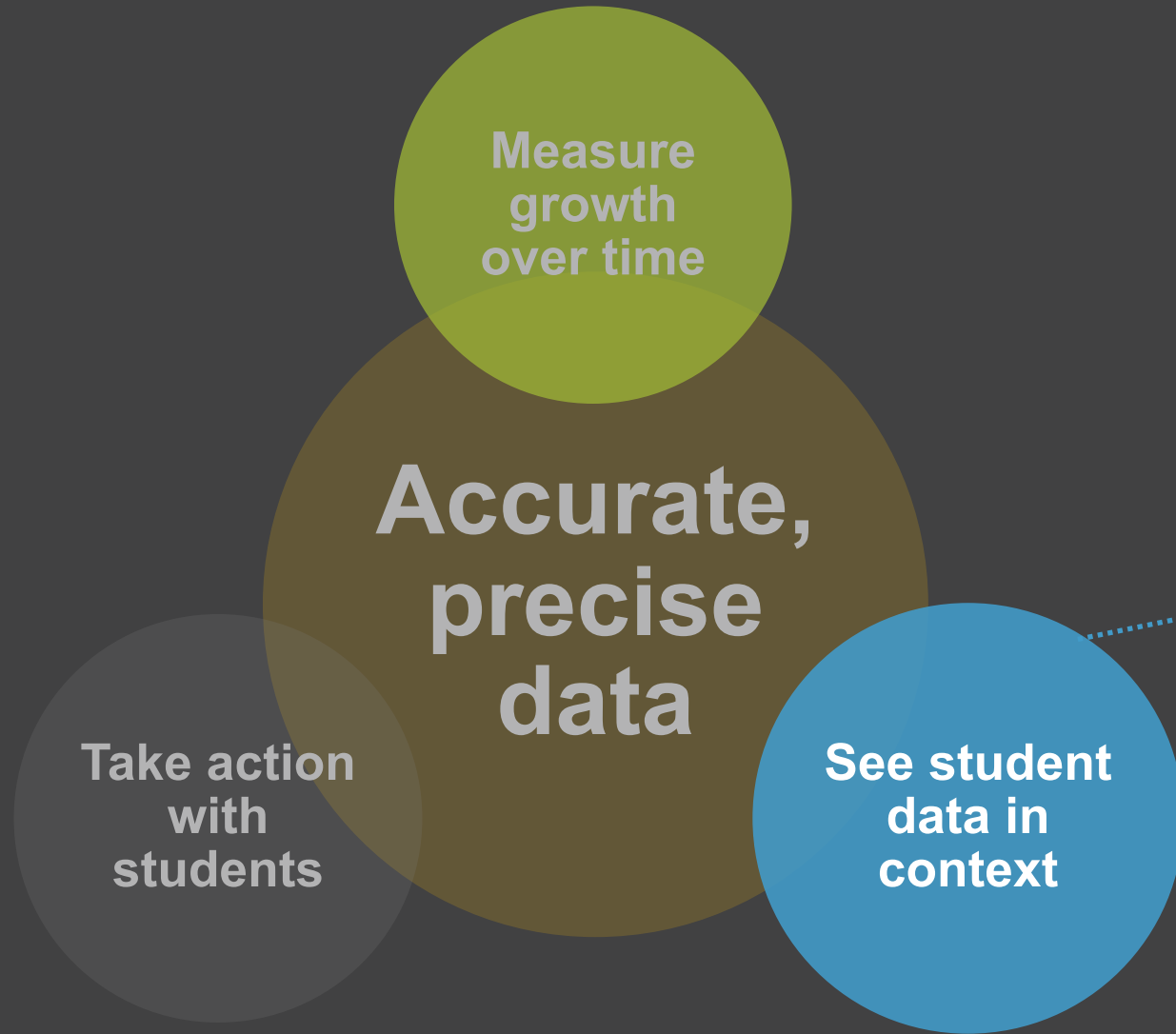
- + Track student progress within and across school years
- + Provide opportunities to course-correct with students
- + If a student is struggling, what additional steps can be taken?

Growth Over Time

KEY

- Recorded Score
- Norms Grade Level Mean
- Growth Goal





- + Nationally representative achievement and growth norms
- + Linking studies to state summative assessments
- + Predictions to college readiness benchmarks (ACT/SAT)



Achievement Status and Growth Summary Report

Kotifani, Jenisha
5th Grade Homeroom

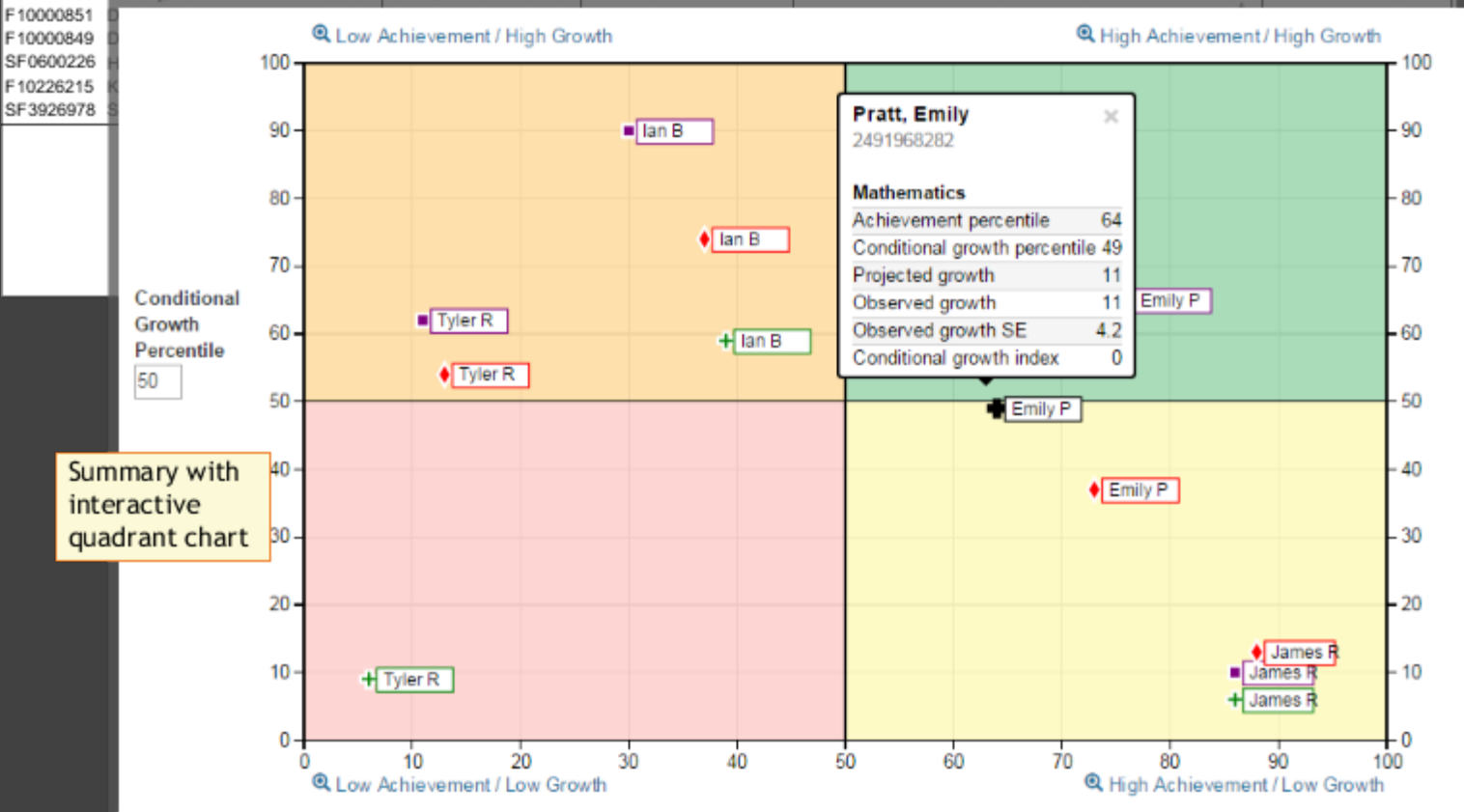
Term Tested: Fall 2015-2016
Term Rostered: Fall 2015-2016
District: NWEA Sample District 3
School: Three Sisters Elementary

Norms Reference Data: 2015
Growth Comparison Period: Fall 2015 - Winter 2016
Weeks of Instruction: Start - 4 (Fall 2015)
 End - 20 (Winter 2016)
Optional Grouping: None
Small Group Display: Yes

Summary or projection for one or more classes and schools

Language Usage

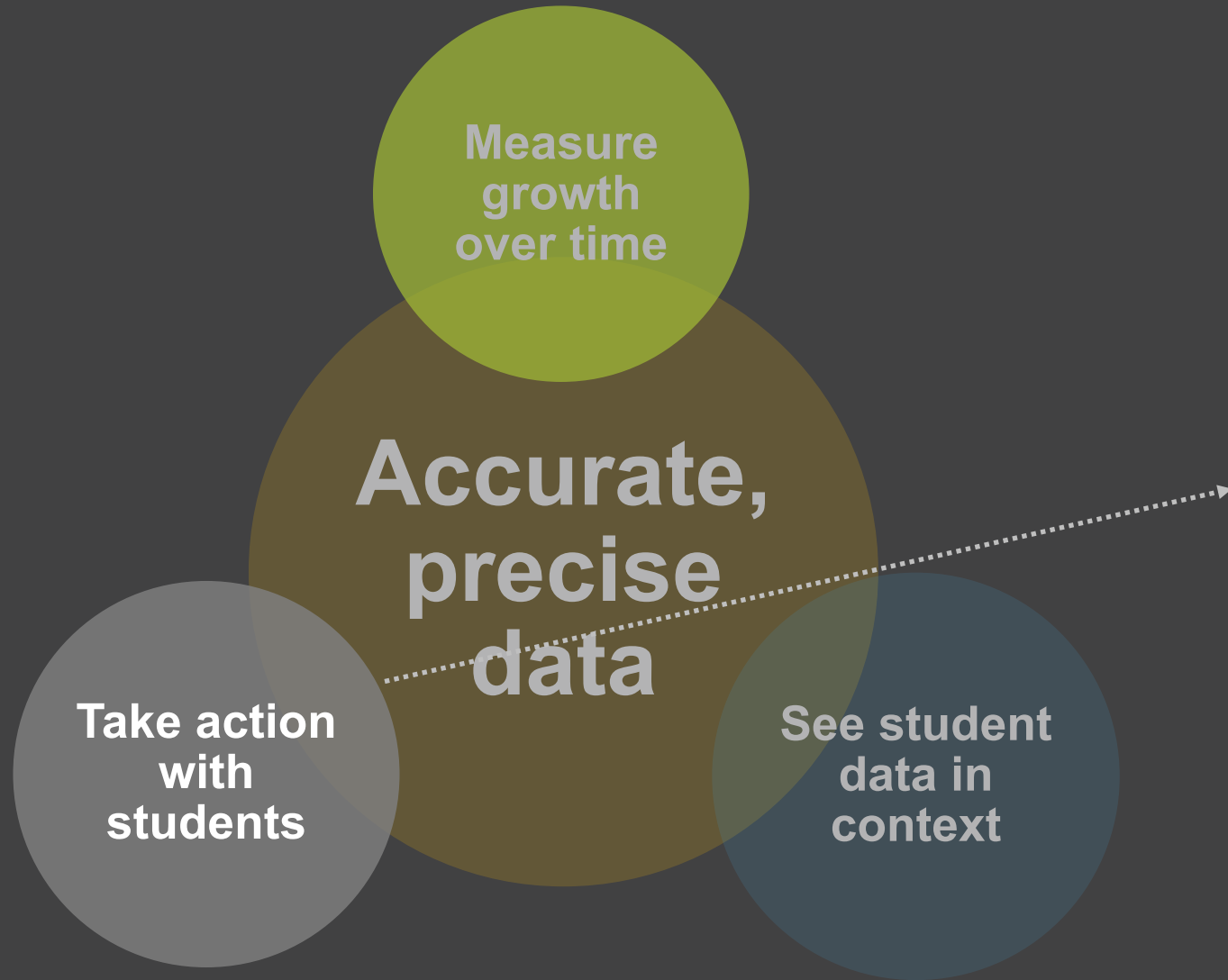
ID	Name	W16 Grade	W16 Date	Achievement Status				Growth							
				Fall 2015		Winter 2016		Student			Comparative				
				RIT Range (+/- SEM)	Percentile Range (+/- SE)	RIT Range (+/- SEM)	Percentile Range (+/- SE)	Projected RIT	Projected Growth	Observed Growth	Observed Growth SE	Growth Index	Met Projected Growth	Conditional Growth Index	Conditional Growth Percentile
SF0701428	Flores, Michael S.	5	1/29/16	208-211-214	57-67-75	217-220-223	72-78-84	215	4	9	4.3	5	Yes	1.0	84
F09000030	Devany, Noni	5	2/3/16	204-207-210	45-54-62	212-215-218	57-66-73	211	4	8	4.23	4	Yes	0.8	80



Summary with interactive quadrant chart

Using **context** to better understand what the data **means**





- + Class Breakdown Reports
- + The Learning Continuum
- + Khan Academy/MAP Accelerator

Putting the data to use in the classroom

District: NWEA Sample District
Term Rostered: Fall 2014-2015
Term Tested: Fall 2013-2014
School: St. Helens Elementary School
Instructor: Saba, Howard D.
Class: Homeroom 1(A)

[Modify Options](#)

Select a Subject in this report to view a Class Breakdown by Goal report
 The score in parentheses by the student's name (i.e. Name (219)) represents their overall RIT score for this subject.

Class Breakdown by RIT [Create a PDF version of this report](#) Letter 8 1/2x11" [Create PDF](#)

Subject	Overall Score			
	121-130	131-140	141-150	151-160
Mathematics	J.A. Dahlquist (125) J.E. Sirgo (128)	F.E. Davidson (134) T.S. Bitterman (138) C.L. Berns (139)	J.N. Felipe (142) B.R. Lawrence (142) R.C. Carson (144) L.A. Smith (144) L.S. VanAllen (144) B.N. Linton (146) N.R. Biaggi (150) B.D. Dallman (150)	H.I. Carston (153) B.O. Glander (154)
Reading	J.E. Sirgo (127) J.N. Felipe (130)	T.S. Bitterman (136) L.A. Smith (137) B.D. Dallman (140) B.O. Glander (140)	H.I. Carston (141) J.A. Dahlquist (142) B.R. Lawrence (144) C.L. Berns (145) F.E. Davidson (145) L.S. VanAllen (148)	B.N. Linton (151) R.C. Carson (152) N.R. Biaggi (155)

Breakdown by RIT shows the high level

Each subject links to the breakdown by goals

Class Breakdown by Goal [Create a PDF version of this report](#) Letter 8 1/2x11" [Create PDF](#)

Subject Reading

MAP: Reading Primary Grades Common Core 2010 / Common Core English Language Arts K-12: 2010

Goal	Goal Score					
	111-120	121-130	131-140	141-150	151-160	161-170
Foundational Skills		J.E. Sirgo (127)	J.N. Felipe (130) B.D. Dallman (140) J.A. Dahlquist (142) L.S. VanAllen (148)	T.S. Bitterman (136) L.A. Smith (137) B.O. Glander (140) H.I. Carston (141) B.R. Lawrence (144) C.L. Berns (145) F.E. Davidson (145) R.C. Carson (152) N.R. Biaggi (155)	B.N. Linton (151)	
Language and Writing	J.E. Sirgo (127)	L.A. Smith (137)	J.N. Felipe (130) T.S. Bitterman (136) H.I. Carston (141) B.R. Lawrence (144) F.E. Davidson (145)	B.D. Dallman (140) B.O. Glander (140) C.L. Berns (145) R.C. Carson (152)	J.A. Dahlquist (142) L.S. VanAllen (148) B.N. Linton (151) N.R. Biaggi (155)	
Literature and Informational		J.E. Sirgo (127) J.N. Felipe (130)	T.S. Bitterman (136) L.A. Smith (137) B.D. Dallman (140) H.I. Carston (141)	B.O. Glander (140) J.A. Dahlquist (142) C.L. Berns (145)	F.E. Davidson (145) L.S. VanAllen (148) B.N. Linton (151) N.R. Biaggi (155)	R.C. Carson (152)

Links to the Learning Continuum and applicable learning statements



Conclusions

- + Our goal: To provide educators with **precise, accurate** data so that you can:
 - Take action with students
 - Measure growth over time
 - See data in context

The design of **MAP Growth** makes that possible.

