Demystifying the IAR

How It's Built
What's New
How to Help Your Students Shine

Heather Colwell

Math Content Specialist Hcolwell@isbe.net





- The Illinois Assessment of Readiness (IAR) is the state assessment and accountability measure for Illinois students enrolled in a public school district.
- IAR assesses the Illinois Learning Standards and is administered in English language arts and mathematics to students in Grades 3-8.





IAR Item Development Cycle



The * indicates a stage that incorporates educator committees



Stage 1 [Year 1]: Development Planning

The IAR test bank is examined to determine areas of need.

The goal is to have items with a variety of complexity levels for each Evidence Statement to meet blueprint specifications for each grade-level.

Test Design Information

IAR Evidence Statements

Evidence Tables and Evidence Statements describe the knowledge and skills that an assessment items or task elicits from students. These are aligned directly to the Illinois Learning Standards.





Stage 3 [Year 1]: Item Writing



Item writers create items based on the item bank status, addressing Evidence Statements to the specifications set forth by ISBE.



A content team reviews and edits items for quality assurance.



ISBE content specialists review each item, making edit suggestions to adhere to ISBE's style guide, item specifications, rubric formats, interaction models, and writing guidelines.



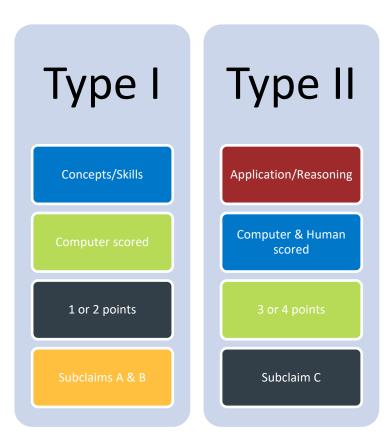
Stage 3 [Year 1]: Math Claims Structure

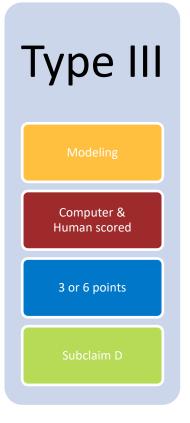
To stay on track for college and career readiness, students need to learn a wide range of skills, content knowledge, and critical-thinking abilities at every grade level as set forth in the Standards for Mathematical Content with connections to the Standards for Mathematical Practice.

- Sub-Claim A: Major Content
- Sub-Claim B: Additional & Supporting Content
- Sub-Claim C: Mathematical Reasoning constructing viable arguments, critiquing the reasoning of others, and/or attending to precision when making mathematical statements. (MP.3,6)
- Sub-Claim D: Mathematical Modeling applying knowledge and skills articulated in the standards for the current grade/course (MP.1,2,4,5,7,8).



Stage 3 [Year 1]: Math Item Writing





Three
Item
Types

All items are aligned to the Career and College Readiness Standards & the Standards for Mathematical Practice.



Stage 3 [Year 1]: Math Item Writing

- Multiple choice
- Multi-select
- Fill-in the blank
- Drag-and-drop
- In-line choice
- Constructed response
- Drawing tool





Stage 4 [Year 1]: Item Review

Committees of IL educators provide feedback on items for eligibility for potential use on the IAR. IL educators bring grade-level classroom and other instructional expertise and experience to thoughtful and meaningful discussions about each of the newly-developed items.



A committee reviews each item through a **Content** lens.

A separate committee reviews each item through a Bias & Sensitivity lens.



Stage 4 [Year 1]: Content Item Review

Content Item Review Committees:

- Evaluate each item through a content lens, looking for content flaws such as irregularities, cluing, multiple keys, and standards alignment issues.
- Make recommendations based on expertise.
 - The items are revised to reflect the committees' recommendations.



Stage 4 [Year 1]: Bias Item Review

Items are evaluated by committees of educators for bias and sensitivity.



- o Bias that *prevents* members of a group from demonstrating that they possess the knowledge and skills being measured.
- Language or content that advantages members of a group in demonstrating that they possess the knowledge and skills being measured.
- Content that *highlights* a potential bias or sensitivity that could lead to disengagement.

Stage 4 [Year 1]: Bias and Sensitivity Item Review

Regional & geographic bias

Gender & age stereotypes

Ethnic, cultural, & religious stereotypes

Socioeconomic & occupational stereotypes



Stage 5 [Year 1]: Test Construction

Using the Operational Test Forms Construction Specifications, items are selected and sequenced for administration. This is a complex, interactive task that requires both content and psychometric expertise.

Online (54 per grade)

Paper-Based Form

Large Print

Read Aloud

Human Reader

Human Signer

ASL

Braille

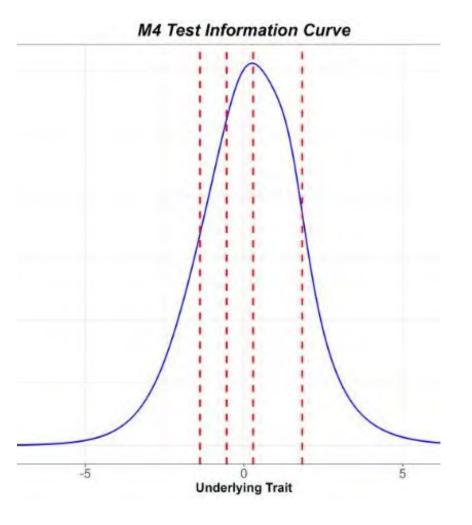
Spanish Paper

Spanish Large Print Spanish Human Reader

Text to Speech



Stage 5 [Year 1]: Test Construction



Each form is constructed to be psychometrically equivalent to other forms, both current and past, based on a normal distribution curve.

Test Characteristic Curves (TCCs)

Test Information Function (TIF)
Curves

Conditional Standard Error of Measurement (CSEM) Curves



Stage 5 [Year 1]: Math Test Blueprint

Items	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8				
Type 1 Items										
1 point	24	20 20 18 2		20	20					
2 points	3	5	5	5	5	4				
Type 1 Totals	27	25	25	23	25	24				
Type 2 Items										
3 points	2	2	2	2	2	2				
4 points	1	1	1	1	1	1				
Type 2 Totals	3	3	3	3	3	3				
Type 3 Items										
3 points	2	2	2	2	2	2				
6 points	1	1	1	1	1	1				
Type 3 Totals	3	3	3	3	3	3				

The table represents a sample. Item counts could vary slightly among forms.



Stage 5 [Year 1]: Math Test Construction

Illinois Learning Standards Domain ¹	Sub-Claim/Reporting Category											
	Major Content 39%			Additional and Supporting Content 19% points			Reasoning 19% points			Modeling 23% points		
	Standards	Evidence Statements	MP	Standards	Evidence Statements	MP	Standards	Evidence Statements	MP	Evidence Statements	MP	
Ratios and Proportional Relationships	6.RP.1; 6.RP.2; 6.RP.3a; 6.RP.3b; 6.RP.3c; 6.RP.3d	6.RP.1; 6.RP.2; 6.RP.3a; 6.RP.3b; 6.RP.3c-1; 6.RP.3c-2; 6.RP.3d	MP.1 MP.2 MP.3 MP.4 MP.5 MP.6 MP.7 MP.8	-	-	MP.1 MP.2 MP.4 MP.5 MP.7	6.RP.A	6.C.8.1	MP.2 MP.3 MP.4 MP.5 MP.6 MP.7	6.D.1* 6.D.2 (5.NBT.B) (5.NF) (5.MD) (5.G.A)	MP.1 MP.2 MP.4 MP.5 MP.7	
The Number System	6.NS.1; 6.NS.5; 6.NS.6a; 6.NS.6b; 6.NS.6c; 6.NS.7a; 6.NS.7b; 6.NS.7c; 6.NS.7d; 6.NS.8	6.NS.1-2; 6.NS.5; 6.NS.6a; 6.NS.6b-1; 6.NS.6b-2; 6.NS.6c-1; 6.NS.6c-2; 6.NS.7a; 6.NS.7b; 6.NS.7c-1; 6.NS.7c-2; 6.NS.7d; 6.NS.8		6.NS.2; 6.NS.3; 6.NS.4	6.NS.2; 6.NS.3-1; 6.NS.3-2; 6.NS.3-3; 6.NS.3-4; 6.NS.4-1; 6.NS.4-2		6.NS.1; 6.NS.6; 6.NS.7; 6.NS.8	6.C.2; 6.C.3; 6.C.4; 6.C.5				
Expressions and Equations	6.EE.1; 6.EE.2a; 6.EE.2b; 6.EE.2c; 6.EE.4; 6.EE.5; 6.EE.6; 6.EE.7; 6.EE.8; 6.EE.9	6.EE.1-1; 6.EE.1-2; 6.EE.2a; 6.EE.2b; 6.EE.2c-1; 6.EE.2c-2; 6.EE.4; 6.EE.5-1; 6.EE.5-2; 6.EE.6; 6.EE.7; 6.EE.8; 6.EE.9		9	- dar		6.EE.3; 6.EE.4; 6.EE.9; 6.EE.B	6.C.1.1; 6.C.6; 6.C.7; 6.C.8.2				
Geometry		ж		6.G.1; 6.G.2; 6.G.3; 6.G.4	6.G.1; 6.G.2-1; 6.G.2-2; 6.G.3; 6.G.4		-	-				
Statistics and Probability		er.		6.SP.1; 6.SP.2; 6.SP.3; 6.SP.4; 6.SP.5	6.SP.1; 6.SP.2; 6.SP.3; 6.SP.4; 6.SP.5		-					

Sample test blueprint



Stage 6 [Year 2]: Field Testing - Math



- Each item is placed on a form for field testing.
- For Math, the field test items are scattered throughout each unit of the assessment, indistinguishable from the operation items that will be scored. All students answer field test items, and they are not part of the operational scoring.



Stage 7 [Year 2]: Rangefinding



A committee of Illinois educators meets to review student responses to hand-scored field test items and expand them into full scorer training sets for operational scoring. Each item has a unique rubric.

Typically, reviewers evaluate multiple student responses to identify aspects that contribute to the overall score.



Stage 8 [Year 2]: Data Review

Two focuses of Data Review:

- 1. Content
- 2. Bias/Sensitivity

Committees of educators ascertain the viability of field-test items for operational testing.





Stage 8 [Year 2]: Content Data Review

<u>Content Data Review</u> focuses on several statistics that can indicate the overall usefulness of a test item, primarily the p-value and the polyserial.

The p-value is calculated as the proportion of test takers who answered a specific item correctly.

The polyserial describes the relationship between a student's performance on the item and his/her/their performance on the test form as a whole. A high polyserial correlation indicates that students who performed better on the item achieved higher scores on the test form than those who performed poorly on the item.



Stage 8 [Year 2]: Bias Data Review



<u>Bias data review</u> focuses on statistics that estimate differences between important student groups on a test item.



Differential Item Functioning (DIF) data review uses DIF stats.



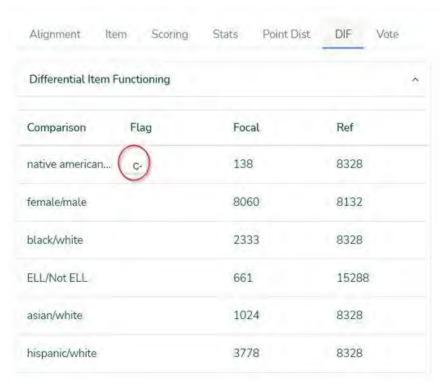
Stage 8 [Year 2]: Bias Data Review

Committees of educators review student response data from field tested items and determine if a student population was disproportionally or unfairly advantage or disadvantaged.

Native American/White
Hispanic/White
Asian/White
African-American/White
Students with multi-race/White
Pacific-Islanders/White
ELLs/NonELLs
Students with disability/Students without disabilities
Female/Male
Economically disadvantaged/Not disadvantaged



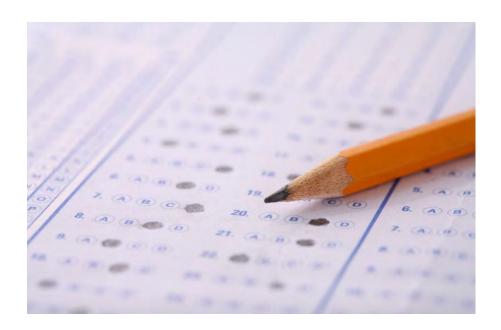
DIF Stats





Stage 9 [Year 2]: Operational Testing

An item is ready to be used on an operational form after a thorough three-year process.





Stage 10 [Year 2]: Reporting







IAR Item Development Cycle



The *indicates a stage that incorporates educator committees

Interested in participating on a committee?

2026 IAR Committee Recruitment Survey



What's New?

- New Administrative Platform (2025)
 - o Illinois Administration Platform replaces Pearson Access

Drawing Box

Next

- TestNav is still the testing platform
- Students will not notice a difference
- Drawing Tool (2026)
 - Visual Reasoning
 - Optional for students
- New Performance Level Descriptors (2025)
 - Summary
 - Detailed
 - Samples to Success



How to Help Your Students Shine

- Constructed Response Items
 - Test Scoring Expectations
 - Common places of error
 - Sample Student Responses
 - Give students a copy of the item and rubric
 - Ask students to answer the item
 - Have students grade sample student responses using the rubric





Helpful Resources

- www.lsbe.net/IAR
- CLICK ON "TEST DESIGN"
 - Blueprints
 - o Evidence Statements
- Released Items
- <u>Practice TestNav</u> (IAR Testing Platform)
- IAR Digital Item Library
- Student Readiness Tool



Questions?



