

ILEARN Blueprints Grade 4 Mathematics (Beginning 2018–19 School Year)

Blueprints serve as a foundational resource in the assessment development process. Blueprints specify the proportionality of how ILEARN assesses the Indiana Academic Standards, including the relative range of each standard on the assessment as represented in the minimum and maximum number of items to be administered to each student.

The Department recruited Indiana educators to inform the development of the blueprint in February 2018. These educators represented different regions of the state, diverse student populations, and content and accessibility expertise. Panels of subject area teachers convened at each grade level, recommended the priorities and associated item ranges noted within the blueprints. Educators also considered the vertical articulation of the content across grades 3 through 8. For Mathematics, educators placed an emphasis on number sense and computation in grades 3–5, and transitioned to more emphasis on algebraic thinking and analysis in grades 6–8.

ILEARN Mathematics will be a computer adaptive assessment, typically referred to as CAT. The blueprints specify the number of operational items students will be administered overall, as well as by reporting category and standard. The CAT item selection algorithm is designed to select items necessary to meet all test blueprint specifications, while also varying item difficulty to adapt to each student’s individual ability.

Overview

The columns of the blueprints highlight key features of test design including: reporting categories, Indiana Academic Standards, standard allocations (number of minimum and maximum items per standard), reporting category allocations and the total operational items possible.

Reporting Category:

A broad domain or segment of the subject area identified by educators as meaningful sets of interrelated standards. Reporting categories are broad to allow for individual level reporting of student performance. In many cases, the reporting category combines two or more domains that are considered related, as indicated by educators. The reporting category column also includes the overall percentage of the assessment characterized by the specific category.

Standard:	The Indiana Academic Standard category code is noted. The full language of the standard can be accessed at https://www.doe.in.gov/standards .
Standard Item Range:	The allocation defines the item range possible for that standard. For adaptive assessments in ELA and Mathematics, a standard with a range that starts at zero indicates that not every student will be assessed on the standard. However, the standard will be assessed at the aggregate level. For fixed form assessments, a standard with a range that starts at zero indicates that not every standard will be assessed each year.
Standard Percentage of Test:	The allocation defines the percentage of the test for each standard and corresponding reporting category.
Total Operational Items:	The range for the total number of items possible on the assessment each year. Note: Field test items do not contribute to the operational points possible noted.

Additional Information

Each student will receive one Performance Task set as part of his or her test. A Performance Task is designed to provide students with an opportunity to demonstrate their ability to apply their knowledge and higher-order thinking skills to explore and analyze a complex, real-world scenario. This Performance Task set will contain several items aligned to the Indiana Academic Content and Process Standards. During a meeting in April 2018, Indiana educators from across the state met to confirm the Indiana Academic Standard alignment. For Mathematics, these Performance Tasks align to content and process standards.

Further, each student will respond to three hand-scored items throughout the assessment. Indiana educators across the state are invited to participate in the scoring of these items.

**ILEARN Blueprints
Grade 4 Mathematics
(Beginning 2018–19 School Year)**

Reporting Category	Standard	Standard Item Range		Standard % of Test		Reporting Category Item Range
		Min	Max	Min	Max	
Algebraic Thinking and Data Analysis (19–24%)	4.AT.1	1	3	2	7	9–11
	4.AT.2	0	2	0	4	
	4.AT.3	0	2	0	4	
	4.AT.4	1	3	2	7	
	4.AT.5	1	3	2	7	
	4.AT.6	0	1	0	2	
	4.DA.1	1	3	2	7	
	4.DA.2	0	2	0	4	
	4.DA.3	0	2	0	4	
Computation (23–28%)	4.C.1	1	3	2	7	11–13
	4.C.2	1	3	2	7	
	4.C.3	1	3	2	7	
	4.C.4	0	2	0	4	
	4.C.5	1	3	2	7	
	4.C.6	1	3	2	7	
	4.C.7	0	2	0	4	
Geometry and Measurement (19–24%)	4.G.1	0	2	0	4	9–11
	4.G.2	0	1	0	2	
	4.G.3	0	1	0	2	
	4.G.4	1	3	2	7	
	4.G.5	0	2	0	4	
	4.M.1	1	3	2	7	
	4.M.2	1	3	2	7	
	4.M.3	0	2	0	4	
	4.M.4	1	3	2	7	
	4.M.5	0	1	0	2	
	4.M.6	0	2	0	4	

Number Sense 23–28%	4.NS.1	0	2	0	4	11–13
	4.NS.2	0	1	0	2	
	4.NS.3	1	3	2	7	
	4.NS.4	0	2	0	4	
	4.NS.5	1	3	2	7	
	4.NS.6	1	3	2	7	
	4.NS.7	0	2	0	4	
	4.NS.8	0	2	0	4	
	4.NS.9	0	2	0	4	

Aggregate Reporting Only

Educators identified the following standards for inclusion on the assessment, but will be aggregated to the overall Scale Score for each student, and not reported as a separate reporting category.

	Standard	Standard Item Range		Standard % of Test		Reporting Category Item Range
		Min	Max	Min	Max	
Process Standards (8–13%)	PS.1	0	2	0	4	4–6
	PS.2	0	2	0	4	
	PS.3	0	2	0	4	
	PS.4	0	2	0	4	
	PS.5	0	2	0	4	
	PS.6	0	2	0	4	
	PS.7	0	2	0	4	
	PS.8	0	2	0	4	

Total Operational Items: 46-48



ILEARN Blueprints Grade 4 English/Language Arts (ELA) (Beginning 2018–19 School Year)

Blueprints serve as a foundational resource in the assessment development process. Blueprints specify the proportionality of how ILEARN assesses the Indiana Academic Standards, including the relative range of each standard on the assessment as represented in the minimum and maximum number of items to be administered to each student.

The Department recruited Indiana educators to inform the development of the blueprint in February 2018. These educators represented different regions of the state, diverse student populations, and content and accessibility expertise. Panels of subject area teachers convened at each grade level, recommended the priorities, and associated item ranges noted within the blueprints. Educators also considered the vertical articulation of the content across grades 3–8. For ELA, educators placed an emphasis on literary text in grades 3–5, and transitioned to more emphasis on informational text in grades 6–8.

ILEARN English/Language Arts will be a computer adaptive assessment, typically referred to as CAT. The blueprints specify the number of operational items students will be administered overall, as well as by reporting category and standard. The CAT item selection algorithm is designed to select items necessary to meet all test blueprint specifications, while also varying item difficulty to adapt to each student’s individual ability.

Overview

The columns of the blueprints highlight key features of test design including: reporting categories, Indiana Academic Standards, standard allocations (number of minimum and maximum items per standard), reporting category allocations and the total operational items possible.

Reporting Category:

A broad domain or segment of the subject area identified by educators as meaningful sets of interrelated standards. Reporting categories are broad to allow for individual level reporting of student performance. In many cases, the reporting category combines two or more domains that are considered related, as indicated by educators. The reporting category column also includes the overall

percentage of the assessment characterized by the specific category.

Standard: The Indiana Academic Standard noting the reporting category code and a brief description. The full language of the standard can be accessed at <https://www.doe.in.gov/standards>.

Standard Item Range: The allocation defines the item range possible for that standard. For adaptive assessments in ELA and Mathematics, a standard with a range that starts at zero indicates that not every student will be assessed on the standard. However, the standard will be assessed at the aggregate level. For fixed form assessments, a standard with a range that starts at zero indicates that not every standard will be assessed each year.

Standard Percentage of Test: The allocation defines the percentage of the test for each standard and corresponding reporting category.

Total Operational Items: The range for the total number of items possible on the assessment each year. Note: Field test items do not contribute to the operational points noted.

Additional Information

Each student will receive one Performance Task set as part of his or her test. A Performance Task is designed to provide students with an opportunity to demonstrate their ability to apply their knowledge and higher-order thinking skills to explore and analyze a complex, real-world scenario. This Performance Task set will contain several items aligned to the Indiana Academic Standards. During a meeting in April 2018, Indiana educators from across the state met to confirm the Indiana Academic Standard alignment. For ELA, these Performance Tasks align to research and writing.

Further, each student will respond to three hand-scored items throughout the assessment. Additionally, a writing prompt is embedded in the Performance Task. Indiana educators across the state are invited to participate in the scoring of these items.

ILEARN Blueprints
Grade 4 English/Language Arts (ELA)
(Beginning 2018–19 School Year)

Reporting Category	Standard	Standard Item Range		Standard % of Test		Reporting Category Item Range
		Min	Max	Min	Max	
Key Ideas and Textual Support/ Vocabulary (31–41%)	4.RL.2.1	1	4	3	12	11–14
	4.RL.2.2	1	4	3	12	
	4.RL.2.3	1	3	3	9	
	4.RN.2.1	1	3	3	9	
	4.RN.2.2	1	3	3	9	
	4.RN.2.3	0	2	0	6	
	4.RV.2.1	1	4	3	12	
	4.RV.2.2	0	2	0	6	
	4.RV.2.4	0	2	0	6	
	4.RV.2.5	0	2	0	6	
	4.RV.3.1	0	2	0	6	
	4.RV.3.2	1	4	3	12	
	4.RV.3.3	0	2	0	6	
Structural Elements and Organization/ Connection of Ideas/Media Literacy (31–41%)	4.ML.2.1	0	4	0	12	11–14
	4.RL.3.1	0	2	0	6	
	4.RL.3.2	1	3	3	9	
	4.RL.4.1	0	1	0	3	
	4.RL.4.2	0	2	0	6	
	4.RN.3.1	0	3	0	9	
	4.RN.3.2	1	4	3	12	
	4.RN.3.3	0	3	0	9	
	4.RN.4.1	0	3	0	9	
	4.RN.4.2	1	3	3	9	

Reporting Category	Standard	Standard Item Range		Standard % of Test		Reporting Category Item Range
		Min	Max	Min	Max	
Writing (33–41%)	4.W.3.1*	0	3	0	9	6–8 CAT and 1 writing prompt
	4.W.3.2 *	0	3	0	9	
	4.W.3.3 *	0	3	0	9	
	4.W.4	0	2	0	6	
	4.W.5	0	2	0	6	
	4.W.6.1a	0	2	0	6	
	4.W.6.1b	0	2	0	6	
	4.W.6.1c	0	2	0	6	
	4.W.6.1d	0	2	0	6	
	4.W.6.1e	0	2	0	6	
	4.W.6.2a	1	3	3	9	
	4.W.6.2b	0	2	0	6	
	4.W.6.2c	0	1	0	3	

*Students will receive one writing prompt (persuasive, informative, or narrative).

Aggregate Reporting Only

Educators identified the following standards for inclusion on the assessment, but will be aggregated to the overall Scale Score for each student, and not reported as a separate reporting category.

Reporting Category	Standard	Standard Item Range		Standard % of Test		Reporting Category Item Range
		Min	Max	Min	Max	
Speaking and Listening (6–9%)	4.SL.3.1	0	3	0	9	2–3
	4.SL.3.2	0	3	0	9	
Total Operational Items: 34–36						

Note: Educators evaluated the Indiana Academic Standards and recommended *Classroom Assessment Only* for the list below.

Category	Sub-Category	Standard
Reading: Foundations	Phonics	4.RF.4.2
	Phonics	4.RF.4.6
	Fluency	4.RF.5
Writing	Handwriting	4.W.2.1
Speaking and Listening	Discussion and Collaboration	4.SL.2.1
	Discussion and Collaboration	4.SL.2.2
	Discussion and Collaboration	4.SL.2.3
	Discussion and Collaboration	4.SL.2.4
	Discussion and Collaboration	4.SL.2.5
	Presentation of Knowledge and Ideas	4.SL.4.1
	Presentation of Knowledge and Ideas	4.SL.4.2

Note: The following Indiana Academic Standards either build upon concepts learned previously or are considered learning outcomes. Learning outcomes are not directly assessed; however, they are indirectly assessed via their related Indiana Academic Standards.

Category	Sub-Category	Standard
Reading: Foundations	Learning Outcome	4.RF.1
	Print Concepts	4.RF.2.1
	Print Concepts	4.RF.2.2
	Print Concepts	4.RF.2.3
	Print Concepts	4.RF.2.4
	Phonological Awareness	4.RF.3.1
	Phonological Awareness	4.RF.3.2
	Phonological Awareness	4.RF.3.3
	Phonological Awareness	4.RF.3.4
	Phonological Awareness	4.RF.3.5
	Phonics	4.RF.4.1
	Phonics	4.RF.4.3
	Phonics	4.RF.4.4
Phonics	4.RF.4.5	
Reading: Literature	Learning Outcome	4.RL.1
	Key Ideas and Textual Support	4.RL.2.4
Reading: Nonfiction	Learning Outcome	4.RN.1
	Synthesis and Connection of Ideas	4.RN.4.3
Reading: Vocabulary	Learning Outcome	4.RV.1
	Vocabulary Building	4.RV.2.3
Writing	Learning Outcome	4.W.1
	Handwriting	4.W.2.2
	Conventions of Standard English: Grammar and Usage / Capitalization, Punctuation, and Spelling	4.W.6.1 4.W.6.2
Speaking and Listening	Learning Outcome	4.SL.1
	Presentation of Knowledge and Ideas	4.SL.4.3
Media Literacy	Learning Outcome	4.ML.1
	Media Literacy	4.ML.2.2

ILEARN Blueprint Grade 4 Science (Beginning 2019–20 School Year)

Blueprints serve as a foundational resource in the assessment development process. Blueprints specify the proportionality of how ILEARN assesses the Indiana Academic Standards, including the relative range of each standard on the assessment as represented in the minimum and maximum number of items to be administered to each student.

The Department recruited Indiana educators to inform the development of the blueprint in February 2018. These educators represented different regions of the state, diverse student populations, as well as content and accessibility expertise. Panels of subject area teachers convened at each grade level recommended the priorities and associated item ranges noted within the blueprints. Educators also considered the vertical articulation of the content across grades 4, 6 and Biology. For Science, educators placed an emphasis on scientific practices involving investigating, reasoning, and communicating in grades 4 and 6, followed by the transition to the development and use of models and more analytical practices in Biology.

ILEARN Science assessments will be computer adaptive assessments, typically referred to as CAT. The blueprints specify the number of operational items students will be administered overall, as well as by reporting category and standard. The CAT item selection algorithm is designed to select items necessary to meet all test blueprint specifications, while also varying item difficulty to adapt to each student's individual ability.

Overview

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reporting category column also includes the overall percentage of the assessment characterized by the specific category.

Standard: The Indiana Academic Standard category code is noted. The full language of the standard can be accessed at <https://www.doe.in.gov/standards>.

Standard Item Range: The allocation defines the item range possible for that standard. For adaptive assessments, a standard with a range that starts at zero indicates that not every student will be assessed on the standard. However, the standard will be assessed at the aggregate level. For fixed form assessments, a standard with a range that starts at zero indicates that standard may not be assessed each year.

Standard Percentage of Test: The allocation defines the percentage of the test for each standard and corresponding reporting category.

Total Number of Items Possible: The range for the total number of items possible on the assessment each year. Note: Field test items do not contribute to the operational points possible noted.

Additional Information

Each student will also receive one Performance Task set as part of his or her test. A Performance Task is designed to provide students with an opportunity to demonstrate their ability to apply their knowledge and higher-order thinking skills to explore and analyze a complex, real-world scientific phenomenon. This Performance Task set will contain several items aligned to the Indiana Academic Standards. For Science, these Performance Tasks align to science and engineering process and content standards.

Further, each student will respond to two hand-scored items throughout the assessment. Indiana educators across the state are invited to participate in the scoring of these items.

ILEARN Blueprint
Grade 4 Science
(Beginning 2018–19 School Year)

Reporting Category	Standard	Standard Item Range		Standard % of Test		Reporting Category Item Range
		Min	Max	Min	Max	
Questioning and Modeling (25–29%)	3-5.CD.1 [CS]	0	1	0	2	12–14
	3-5.CD.4 [CS]	0	2	0	4	
	3-5.DI.1 [CS]	0	2	0	4	
	3-5.DI.2 [CS]	0	1	0	2	
	3-5.E.1	1	3	2	6	
	3-5.IC.1 [CS]	1	3	2	6	
	3-5.NC.2 [CS]	0	1	0	2	
	3-5.PA.1 [CS]	0	2	0	4	
	4.ESS.1	1	3	2	6	
	4.PS.1	1	3	2	6	
	SEPS.1	1	3	2	6	
	SEPS.2	1	3	2	6	
Investigating (25–29%)	3-5.DI.3 [CS]	0	2	0	4	12–14
	3-5.E.3	0	1	0	2	
	3-5.PA.2 [CS]	0	1	0	2	
	4.ESS.3	1	3	2	6	
	4.LS.1	1	3	2	6	
	4.PS.2	1	3	2	6	
	4.PS.3	1	3	2	6	
	SEPS.3	1	3	2	6	
Analyzing, Interpreting, and Computational Thinking (21–25%)	3-5.CD.3 [CS]	0	1	0	2	10–12
	3-5.DI.4 [CS]	1	3	2	6	
	3-5.E.2	1	3	2	6	
	3-5.IC.2 [CS]	1	3	2	6	
	3-5.PA.3 [CS]	0	2	0	4	
	4.ESS.2	1	3	2	6	
	4.LS.3	0	2	0	4	
	4.PS.5	0	2	0	4	
	SEPS.4	1	3	2	6	
	SEPS.5	1	3	2	6	

Explaining Solutions, Reasoning, and Communicating (21–25%)	3-5.CD.2 [CS]	0	2	0	4	10–12
	3-5.DI.5 [CS]	0	2	0	4	
	3-5.IC.3 [CS]	0	2	0	4	
	3-5.IC.4 [CS]	0	2	0	4	
	3-5.NC.1 [CS]	0	1	0	2	
	4.ESS.4	1	3	2	6	
	4.LS.2	0	2	0	4	
	4.PS.4	0	2	0	4	
	SEPS.6	1	3	2	6	
	SEPS.7	1	3	2	6	
	SEPS.8	1	3	2	6	
Total Operational Items: 47-49						

Note: [CS] indicates a Computer Science Standard.