

# Blueprint for the Indiana Alternate Assessment

## Grade 6 Science

### (Beginning 2018-19 School Year)

Blueprints serve as a foundational resource in the assessment development process. Blueprints identify the point values and relative weight of each of the Indiana Academic Standards assessed. For the alternative assessment, Content Connectors that align to each standard are also included. Panels of content and special education teachers at each grade level, representative of Indiana student populations and in partnership with the Department of Education recommended the priorities and associated point values noted within the blueprints.

The 2016 Indiana Science Standards increased the breadth and scope of the 2010 standards by adding a new component: process standards. Students are expected to identify and explain content, as well as understand how the data was collected and analyzed to reach those conclusions (scientific and engineering process). The Indiana assessment is designed to test students' understanding of science and engineering processes in conjunction with content. They are expected to integrate both into their understanding and answers.

In addition to the new content and process standards, Indiana added computer science standards to keep up with the changing technological environment our students face. These standards help prepare them to be responsible digital citizens and understand the role technology plays in modern society. Federal accountability requires that these be tested with the science content and process standards.

#### **Overview**

The columns of the blueprint highlight key features of test design including: reporting categories, Indiana Academic Standards, standard allocations, reporting category allocations and the total operational points possible.

**Reporting Category:** The broad content category for the standard representing a segment or domain of content approved by educators as key for reporting. Examples across content areas may include: Number Sense in Mathematics (6.NS); Physical Science in Science (6.PS); and Writing in English/Language Arts (6.W).

The reporting category column also includes the overall percentage of the assessment characterized by the specific category. The overall percentage of the assessment is considered 100%.

- Standard:** The Indiana Academic Standard noting the reporting category code and a *brief* description. The full language of the standard can be accessed [here](#).
- Content Connectors:** The Content Connectors are the alternate achievement standards aligned to the Indiana Academic Standards and are approved by educators. They include the necessary knowledge and skills that students with significant cognitive disabilities need in order to reach the learning targets or critical big ideas within the Indiana Academic Standards.
- Standard Allocation:** The allocation defines the point range possible for that standard and the percentage of that standard *based on the total points for the assessment*.
- Reporting**
- Category Allocation:** The point range possible for all of the standards in that category combined.
- Total Points Possible:** The range for the total number of points possible on the assessment each year. The total possible points may vary slightly year to year due to the nature of how test questions are developed for each standard. *Note: Field test items do not contribute to the operational points possible noted.*

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Reporting Category <sup>1</sup>	Standard	Content Connectors	Standard Allocations		Reporting Category Allocation
			Point Range	% Range <sup>1</sup>	Total Point Range
<b>Physical Science (16-19%)</b>	<b>6.PS.1</b> How motion is defined and described		Assessed in the classroom		6-7
	<b>6.PS.2</b> Motion graphs		Assessed in the classroom		
	<b>6.PS.3</b> Potential and kinetic energy	Describe that energy can be transferred between kinetic and potential energy.	6-7	16-19%	
	<b>6.PS.4</b> Light, sound and energy waves		Assessed in the classroom		
<b>Earth &amp; Space Science (16-19%)</b>	<b>6.ESS.1</b> Role of gravity and inertia		Assessed in the classroom		6-7
	<b>6.ESS.2</b> Sun-Earth system models	Understand that the motion and relative positions of the sun, moon, and Earth create days, seasons and eclipses.	2-4	5-11%	
	<b>6.ESS.3</b> Compare/contrast objects in the solar system	Understand how planets differ from each other and from comets, asteroids, the moon, and the sun.	2-4	5-11%	
<b>Life Science (16-22%)</b>	<b>6.LS.1</b> Homeostasis		Assessed in the classroom		6-8
	<b>6.LS.2</b> Photosynthesis	Describe the process of photosynthesis and identify producers in a food chain/web.	3-5	8-14%	
	<b>6.LS.3</b> Interaction of organisms	Understand different animal relationships and that an organism can be both predator and prey.	3-5	8-14%	
	<b>6.LS.4</b> Effect of change on native organisms		Assessed in the classroom		
	<b>6.LS.5</b> Impact of invasive species on ecosystems.		Assessed in the classroom		
<b>Engineering (16-19%)</b>	<b>6-8.E.1</b> Identify criteria and constraints of designs	Explain the effectiveness of design solutions and their impact on people and the environment.	6-7	16-19%	6-7
	<b>6-8.E.2</b> Evaluate competing designs		Assessed in the classroom		

	<b>6-8.E.3</b> Analyze data to evaluate several designs		Assessed in the classroom		
	<b>6-8.E.4</b> Develop a prototype		Assessed in the classroom		
<b>Science &amp; Engineering Process Standards (16-19%)</b>	<b>SEPS.1</b> Posing questions and defining problems	Understand that engineers and scientists solve problems and answer questions.	1-2	3-5%	6-7
	<b>SEPS.2</b> Developing and using models and tools	Select and use the appropriate model and/or tool for a given problem/situation.	1-2	3-5%	
	<b>SEPS.3</b> Constructing and performing investigations	Understand the steps of the scientific method.	1-2	3-5%	
	<b>SEPS.4</b> Analyzing and interpreting data	Look at graphs/tables to identify trends, find outliers, and make predictions about why outliers appear.	1-2	3-5%	
	<b>SEPS.5</b> Mathematics and computational thinking	Predict the next data point in a pattern or trend.	1-2	3-5%	
	<b>SEPS.6</b> Constructing explanations and solutions	Use results/data to select the correct explanation for a given problem and explain why it is correct.	1-2	3-5%	
	<b>SEPS.7</b> Engaging in argument from evidence	Select the most appropriate piece of evidence to support an argument and identify the best solution for a problem.	1-2	3-5%	
	<b>SEPS.8</b> Obtaining, evaluating, and communicating information	Determine whether given data support/do not support a hypothesis and select the correct reason why.	1-2	3-5%	
	<b>6-8.DI.1</b> Using algorithms to design solutions		Assessed in the classroom		6-7
	<b>6-8.DI.2</b> Describe parallelization		Assessed in the classroom		
	<b>6-8.DI.3</b> Representing data in a variety of ways	Interpret data from a graph. Identify the best graph/chart/diagram to represent the data.	2-4	5-11%	
	<b>6-8.DI.4</b> Hierarchy and abstraction in coding		Assessed in the classroom		
	<b>6-8.DI.5</b> Interact with models and simulations		Assessed in the classroom		
	<b>6-8.CD.1</b> Hardware and software		Assessed in the classroom		
	<b>6-8.CD.2</b> Troubleshooting hardware and software		Assessed in the classroom		

	<b>6-8.CD.3</b> Computer systems and networks		Assessed in the classroom		
	<b>6-8.CD.4</b> Differences between humans and machines		Assessed in the classroom		
	<b>6-8.PA.1</b> Selecting tools for personal productivity	Identify appropriate technology tools to accomplish specific tasks.	2-4	5-11%	
	<b>6-8.PA.2</b> Implementing solutions using code		Assessed in the classroom		
	<b>6-8.PA.3</b> Open-ended problem solving		Assessed in the classroom		
	<b>6-8.NC.1</b> Collaboratively using technology		Assessed in the classroom		
	<b>6-8.NC.2</b> Collaboration with peers		Assessed in the classroom		
	<b>6-8.IC.1</b> Legal and ethical digital behaviors	Identify legal/illegal behaviors in given digital situations.	2-4	5-11%	
	<b>6-8.IC.2</b> Impacts of technology on life		Assessed in the classroom		
	<b>6-8.IC.3</b> Electronic information sources		Assessed in the classroom		
	<b>6-8.IC.4</b> Ethical issues that relate to technology		Assessed in the classroom		
<b>Total Points Possible</b>					36-38

<sup>1</sup>Percentages are based on the total points for the test, not the points for the reporting category.