

Dr. Katie Jenner, Secretary of Education

To: Indiana General Assembly

From: Shellie Hartford, Director of Teaching and Learning

Date: July 1, 2024

Subject: High-Quality Curricular Materials for Science, Technology, Engineering, and Mathematics (STEM) Report

Pursuant to Indiana Code (IC) 20-20-5.5-2, the Indiana Department of Education (IDOE) conducted a curriculum evaluation process to evaluate, approve, and publish a list of high-quality curricular materials for use with science, technology, engineering, and math.

IC 20-20-5.5-2(h) requires IDOE to submit an annual report that describes the method used to conduct the evaluation required under subsection (a) and contains the results of the evaluation. The report must:

- 1. Provide a list of each curricular material evaluated and a summary of the evaluation for each curricular material.
- 2. Provide a listing and summary review for the high-quality curricular materials approved by IDOE.
- 3. Include any clarification or response from the publisher of a curricular material related to IDOE's summary review provided under subdivision (2).
- 4. Include the written, exact, and standard statewide price provided by the publisher of the curricular material under subsection (e) for each high-quality curricular material approved by IDOE under this section.

Evaluation Timeline & Process

April 2023

• The Indiana General Assembly enacts IC 20-20-5.5-2, establishing the requirement for IDOE to conduct a high-quality curricular materials evaluation process for use with science, technology, engineering, and math.

May - June 2023

• IDOE defines an evaluation review process based on legislative requirements and available resources.



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July 2023

- IDOE invites curriculum providers ("vendors") to participate in Indiana's high-quality curricular material evaluation process as outlined in the <u>2023 High-Quality Curricular Materials Advisory</u> <u>List Submission Guide</u>. Individual STEM evaluation tools are linked within the submission guide.
- Curriculum providers interested in participating must submit a letter of intent for the content area(s), grade level(s), and/or course(s) for which they plan to submit curricular materials for IDOE evaluation.

August 2023

- 46 interested vendors submitted their letter of intent to IDOE by August 21, 2024. The letter of intent does not require vendors to submit curricular materials for review.
- IDOE seeks four to six qualified stakeholders (e.g., educators, community members) with content-specific expertise to serve on each review committee.

September 2023

• IDOE selects and confirms 107 interested educators and community members to serve on evaluation review committees based on their respective educational qualifications and professional experiences.

October 2023

- 16 vendors submit 36 sets of curricular materials for committee review.
- Committee participants asynchronously review assigned curricular materials with evaluation criteria and submit feedback ahead of committee meetings.

November 2023

- IDOE convenes 31 virtual review committees to confirm alignment of assigned curricular materials with evaluation criteria.
- Each committee consists of four to six reviewers and reviews an average of two to four sets of curricular materials from respective vendors for a given grade band (e.g., K-5, 6-8) or high school course (e.g., Algebra I, Chemistry) in alignment with reviewers' content knowledge and expertise.
- Committees approve only curricular materials that align with all applicable evaluation criteria for the assigned content area, including sufficient alignment with the Indiana Academic Standards (IAS).
- Committees provide detailed feedback for vendors related to any specific evaluation criteria with which the curriculum materials do not adequately align.
- IDOE notifies some vendors that their curricular materials are approved and notifies other vendors of committee feedback that requires additional follow up to ensure alignment of curriculum materials with all applicable evaluation criteria.



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December 2023

- Vendors provide additional evidence (e.g., clarifying narrative, links, files) to address committee feedback related to one or more evaluation criteria.
- Committee participants asynchronously review vendor responses to determine alignment with all applicable evaluation criteria.
- IDOE reconvenes virtual committees to discuss vendor feedback related to alignment of curricular materials with all applicable evaluation criteria and make formal recommendations for each set of assigned curricular materials (i.e., approve, not approve).
- Committees approve only curricular materials that align with all applicable evaluation criteria.
- IDOE notifies each vendor of the committees' final decisions (i.e., approved, not approved).

February - May 2024

- IDOE repeats the above process to include curricular materials aligned with select Next Level Programs of Study (NLPS) and College Board's AP courses for high school computer science and engineering.
- Nine vendors submit a total of 38 curricular materials for IDOE review (10 submissions for engineering; 28 submissions for computer science), of which IDOE approves 29 curricular materials and does not approve 10.

May 2024

• IDOE publishes the complete list of approved curricular materials on the High-Quality Curricular Material advisory list.

Committee Reviews

IDOE assigned vendor-submitted curricular materials to 107 confirmed committee participants for asynchronous review in October 2023. 25 committees virtually convened in November 2023 to discuss curricular materials and determine approval status based on alignment of the curricular materials with the applicable evaluation criteria. During the November meeting, six committees approved 11 sets of curricular materials that aligned with all applicable evaluation criteria. Committees did not request any vendor follow-up for curricular materials approved during the November 2023 meetings.

19 committees requested additional evidence from respective vendors to address any missing or unclear components based on one or more applicable evaluation criteria. Following asynchronous reviews of the vendor responses, these committees convened virtually in December 2023 to confirm whether the vendor's additional supporting documentation adequately met the specific evaluation criteria.

IDOE reviewed and confirmed all committee recommendations to approve (Table 1) a given set of curricular materials. IDOE followed a similar process from February to May 2024 to conduct an internal evaluation of vendor-submitted curricular materials for high school computer science and engineering



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courses, notifying vendors in the same fashion. IDOE communicated all decisions to vendors. The names of all approved curricular materials (including a vendor-supplied product website link for public access), the corresponding course(s) for which they were approved, and the vendor's written, exact, and standard statewide price ("Pricing") are outlined in Table 1.

Table 1. Approved High-Quality STEM Curricular Materials

Science			
Vendor Name	Product Name and Link	Course(s)	Pricing
Amplify Education, Inc.	Amplify Science K-5	N/A	Cost Shoot
Amplify Education, Inc.	Amplify Science 6-8	N/A	Cost Sheet
Cengage Learning Inc.	National Geographic Earth and Space Science	Earth and Space Science	
Cengage Learning Inc.	An Introduction to Physical Science 15e	Integrated Chemistry and Physics	Cost Sheet
Cengage Learning Inc.	National Geographic World of Chemistry	Chemistry	
Discovery Education, Inc.	Science Techbook for Indiana 1, 3, 4, 5	N/A	Cost Sheet
Great Minds PBC	PhD Science K-5	N/A	Cost Sheet
Houghton Mifflin Harcourt (HMH) Publishing Company	HMH Into Science K-5	N/A	Cost Sheet
HMH Publishing Company	HMH Into Science 6-8	N/A	
HMH Publishing Company	HMH Science Dimensions Biology	Biology	
HMH Publishing Company	HMH Science Dimensions Earth and Space Science	Earth and Space Science	
HMH Publishing Company	HMH Science Dimensions Physics	Physics I	
McGraw Hill	Indiana K-5 Inspire Science	N/A	
McGraw Hill	Indiana 6-8 Inspire Science	N/A	<u>Cost Sheet</u>
McGraw Hill	Indiana Inspire Science Integrated Chemistry and Physics	Integrated Chemistry and Physics	
McGraw Hill	Indiana Inspire Science Biology	Biology	



McGraw Hill	Indiana Inspire Science Chemistry	Chemistry	
McGraw Hill	Indiana Inspire Science Earth Science	Earth and Space Science	
McGraw Hill	Welsh, Hole's Essentials of Anatomy & Physiology	Anatomy and Physiology	
Project Lead the Way (PLTW)	PLTW Launch K-5	N/A	Cost Sheet
Savvas Learning	Savvas Elevate Science K-5	N/A	
Savvas Learning	Savvas Indiana Elevate Science 6-8	N/A	
Savvas Learning	Savvas Indiana Experience Biology	Biology	Cost Sheet
Savvas Learning	Savvas Experience Chemistry	Chemistry	
Savvas Learning	Savvas Experience Physics	Physics I	
Studies Weekly, Inc.	Studies Weekly Explore Science K-5	N/A	Cost Sheet
Twig Education, Inc.	Twig Science K-8	N/A	Cost Sheet

Technology (Computer Science)			
Vendor Name	Product Name and Link	Course(s)	Pricing
Cengage Learning Inc.	Invitation to Computer Science AP	4568 AP Computer Science Principles	Cost Sheet
Cobi Computer Science	Cobi AP Computer Science Principles	4568 AP Computer Science Principles	Cost Sheet
Cobi Computer Science	Cobi AP Computer Science A	4570 AP Computer Science A	
Code.org	Computer Science Fundamentals K-5	N/A	
Code.org	Computer Science Discoveries 6-8	N/A	
Code.org	Principl	4568 AP Computer Science Principles	<u>Cost Sheet</u>
	Computer Science Principles	NLPS 7183 Principles of Computing	
Code.org		4570 AP Computer Science A	
	Computer Science A	4570 AP Computer Science	
CodeHS	Indiana Computer Science K-8	N/A	Cost Sheet
CodeHS	AP Computer Science Principles	4568 AP Computer Science	



		Principles	
CodeHS	Indiana Introduction to Computer Science	NLPS 4803 Introduction to Computer Science	
CodeHS	Indiana Principles of Computing	NLPS 7183 Principles of Computing	
CodeHS	Indiana Topics in Computer Science	NLPS 7351 Topics in Computer Science	
CodeHS	AP Computer Science A	4570 AP Computer Science A	
CompuScholar, Inc.	Computer Science Foundations	4568 AP Computer Science Principles	Cost Sheet
CompuScholar, Inc.	Java Programming	4570 AP Computer Science A	
Project Lead the Way (PLTW)	PLTW Launch K-5	N/A	
PLTW	PLTW Gateway 6-8	N/A	
PLTW	Computer Science A	NLPS 7352 Computer Science	
		4570 AP Computer Science A	
PLTW	Computer Science Essentials	NLPS 7183 Principles of Computing	<u>Cost Sheet</u>
DITW		NLPS 7351 Topics in Computer Science	
PLTW	Computer Science Principles	4568 AP Computer Science Principles	
UTeach	<u>UTeach AP CS Principles and CSA</u> <u>Curriculum and PD</u>	4568 AP Computer Science Principles	Cost Sheet
UTeach	UTeach AP CS A	4570 AP Computer Science A	

Engineering			
Vendor Name	Product Name and Link	Course(s)	Pricing
Project Lead the Way (PLTW)	Introduction to Engineering Design	4802 Introduction to Engineering Design	
PLTW	Environmental Sustainability	4818 Environmental Sustainability	Cost Sheet
PLTW	Aerospace Engineering	5518 Aerospace Engineering	



PLTW	Computer Integrated Manufacturing	5534 Computer Integrated Manufacturing
PLTW	Digital Electronics	5538 Digital Electronics
PLTW	Principles of Engineering	5644 Principles of Engineering
PLTW	Civil Engineering and Architecture	5650 Civil Engineering and Architecture

Mathematics			
Vendor Name	Product Name and Link	Course(s)	Pricing
Amplify Education, Inc.	Desmos Math 6-8	N/A	Cost Sheet
Carnegie Learning, Inc.	Carnegie Learning Middle School Math Solution 6-8	N/A	Cost Sheet
Carnegie Learning, Inc.	Carnegie Learning High School Math Solution - Algebra I	Algebra I	
Carnegie Learning, Inc.	Carnegie Learning High School Math Solution - Geometry	Geometry	Cost Sheet B*
Carnegie Learning, Inc.	Carnegie Learning High School Math Solution - Algebra II	Algebra II	
Cengage Learning, Inc.	Calculus for AP, Larson/Battaglia 2e	Calculus	
Cengage Learning, Inc.	Precalculus: Mathematics for Calculus, Stewart/Redlin/Watson 8e	Pre-calculus: Algebra	Cost Sheet
Cengage Learning, Inc.	Precalculus with Limits, Larson/Battaglia <u>5e</u>	Pre-calculus: Trigonometry	
Curriculum Associates, LLC	Ready Indiana Mathematics K-8	N/A	Cost Sheet
Great Minds PBC	Eureka Math Squared K-8	N/A	Cost Sheet
HMH Publishing Company	HMH Into Math K-8	N/A	
HMH Publishing Company	HMH Into AGA (Algebra I)	Algebra I	Cost Sheet
HMH Publishing Company	HMH Into AGA (Geometry)	Geometry	



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HMH Publishing Company	HMH Into AGA (Algebra II)	Algebra II	
McGraw Hill	Indiana Reveal Math K-5	N/A	
McGraw Hill	Indiana Reveal Math 6-8	N/A	
McGraw Hill	Indiana Reveal Algebra I	Algebra I	
McGraw Hill	Indiana Reveal Geometry	Geometry	Cost Sheet
McGraw Hill	Indiana Reveal Algebra II	Algebra II	
McGraw Hill	Miller, Precalculus, High School Edition	Pre-calculus: Algebra	
McGraw Hill	Bluman, Elementary Statistics: A Step by Step Approach, High School Edition	Probability and Statistics	
Savvas Learning	Savvas Indiana enVision Math K-8	N/A	Cost Shoot
Savvas Learning	Savvas Indiana enVision Math Algebra 1	Algebra I	Cost Sheet

*This vendor also offers the approved curricular materials in an all-digital format at no cost.

IDOE notified vendors of any curricular materials not approved by committees (Table 2) and provided a copy of the final evaluation tool reflecting feedback.

Nine vendors submitted a total of 24 curricular materials that were not approved due to insufficient and/or missing evidence supporting one or more required evaluation criteria (e.g., scaffolding and supports for English learners, alignment with the IAS or NLPS competencies, sufficient depth and breadth of IAS, adequate guidance for educators). Three vendors chose to withdraw their curricular materials due to unresolveable alignment issues.

Table 2. Vendor-Submitted Curricular Materials Not Approved by IDOE and Committees

Science		
Vendor Name	Product Name	
Bedford, Freeman & Worth Publishing Group	Living by Chemistry	
Cengage Learning, Inc.	Body Structures and Functions	
Cengage Learning, Inc.	National Geographic Biology	
Cengage Learning, Inc.	Environmental Science: Sustaining Your World	
Houghton Mifflin Harcourt Publishing Company	HMH Science Dimensions Chemistry	
McGraw Hill	Principles of Environmental Science	



Technology (Computer Science)		
Vendor Name	Product Name	
Cengage Learning, Inc.	Invitation to Computer Science	
Cengage Learning, Inc.	CompTIA and Guide to Network Security Fundamentals	
Cengage Learning, Inc.	Principles of Information Security	
Cengage Learning, Inc.	Introduction to Engineering Drafting, Design, and Presentation	
Cengage Learning, Inc.	Architectural Drafting and Design	
Cengage Learning, Inc.	Energy, Environment, and Sustainability	
The Learning Internet, Inc.	Easy Code	
New Jersey Center for Teaching and Learning (NJCTL)	AP Computer Science Principles (withdrew from process)	
NJCTL	AP Computer Science A (withdrew from process)	
Rex K-12	Technology Learning Platform (withdrew from process)	
Engi	neering	
Vendor Name	Product Name	
Cengage Learning, Inc.	Architectural Drafting and Design	
Cengage Learning, Inc.	Energy, Environment, and Sustainability (withdrew from process)	
Cengage Learning, Inc.	Introduction to Engineering Drafting, Design, and Presentation	
Cengage Learning, Inc.	CompTIA and Guide to Network Security Fundamentals	
Cengage Learning, Inc.	Principles of Information Security	
Mathematics		
Vendor Name	Product Name	
Bedford, Freeman & Worth Publishing Group	Statistics and Probability with Applications, 4th Ed.	
Cengage Learning, Inc.	Understanding Basic Statistics	
ORIGO Education	Stepping Stones K-6	