**INDIANA DEPARTMENT of EDUCATION**

# 2024 INDIANA CONTENT CONNECTORS
## INTEGRATED STEM

## HIGH SCHOOL

in.gov/doe

# Indiana Content Connectors Context and Purpose

## Introduction

The Indiana Content Connectors for High School Integrated STEM are the result of a process designed to identify, evaluate, synthesize, and create high-quality learning expectations for Indiana students with significant cognitive disabilities.

The Indiana Department of Education (IDOE) convened stakeholder committees to review proposed revisions to Indiana's Alternative Standards, known as content connectors. The content connectors are designed to measure the knowledge and skills of students with the most significant cognitive disabilities and are assessed with the state's alternate assessment. The content connectors are designed to ensure that all Indiana students in this population are prepared with essential knowledge and skills needed to access employment, enrollment, or enlistment leading to service.

## What are the Content Connectors and how should they be used?

The Indiana Content Connectors are designed to help educators, parents, students, and community members understand the necessary content for each grade level, and within each content area domain, to access employment, enrollment, or enlistment leading to service. These content connectors should form the basis for strong core instruction for all students at each grade level and content area. The content connectors identify the minimum academic content or skills to which Indiana students need access in order to be prepared for success after graduation, but they are not an exhaustive list.

While the Indiana Content Connectors establish key expectations for knowledge and skills and should be used as the basis for curriculum, the content connectors by themselves do not constitute a curriculum. It is the responsibility of the local school corporation to select and formally adopt curricular tools, including textbooks and any other supplementary materials, that align with Indiana Content Connectors. Additionally, corporation and school leaders should consider the appropriate instructional sequence of the content connectors as well as the length of time needed to teach each one. Every content connector has a unique place in the continuum of learning, but each content connector will not require the same amount of time and attention. A deep understanding of the vertical articulation of the standards will enable educators to make the best instructional decisions. These content connectors must also be complemented by robust, evidence-based instructional practices to support overall student development. By utilizing strategic and intentional instructional practices, other areas such as STEM and employability skills can be integrated with the content connectors.

## Acknowledgments

**High School Integrated STEM**

| Indiana Academic Standards | Content Connectors |
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| **Communication and Collaboration** ||
| **HS.CC.1:** Communicate evidence, investigations, analyses, and the solution(s) of a problem in multiple media forms appropriate for the audience. | **HS.CC.1a:** Collect and share evidence in multiple media forms to inform an audience about a solution to a problem. |
| **HS.CC.2:** Implement roles and responsibilities to collaborate, contribute, and/or lead within and across various group settings (i.e., online, onsite and/or hybrid) and situations. | **HS.CC.2a:** Collaborate while carrying out assigned roles and responsibilities. |
| **HS.CC.3:** Evaluate competing solutions or arguments in a systematic way based on qualitative and/or quantitative evidence. | **HS.CC.3a:** Communicate the best solution(s) or argument(s) for a problem or investigation based on evidence. |
| **Data Analysis and Measurement** ||
| **HS.DM.1:** Use multiple systems of measurement (i.e., standard and metric) and data sets (e.g., plots, tables, graphs, charts) defined in course-level content standards to analyze real-world scenarios and the mathematical relationships represented by the data. | **HS.DM.1a:** Use two or more provided sources of data (e.g., measurement, data sets, plots, tables, graphs, charts), defined in course-level content standards, to describe real-world scenarios or the mathematical relationships represented by the data. |
| **HS.DM.2:** Construct visual representations or conduct statistical analyses defined in course-level content standards. | **HS.DM.2a:** Construct visual representations or apply statistical analysis (e.g., range, mode, median) to interpret visual representations defined in course-level content standards (e.g., bar graphs, charts), using digital tools when possible and feasible. |
| **HS.DM.3:** Use approximations and evaluate reasonableness of observations, results, and solutions throughout processes. | **HS.DM.3a:** Use approximations to categorize observations, results, or solutions throughout processes as reasonable or unreasonable, and justify your selection. |

| Inquiry-Based Approaches and Problem Solving | |
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| **HS.IPS.1:** Conduct or extend an investigation, analyze results, iterate, and revise to improve the design. | **HS.IPS.1a:** Conduct or extend an investigation, analyze (e.g., finding relationships between data) the results and suggest one way the design of the investigation could be improved upon, iterate and revise to improve the design. |
| **HS.IPS.2:** Determine one or more viable solutions using data and information to resolve a scenario given criteria and constraints. | **HS.IPS.2a:** Given both a specific set of criteria and constraints, find one or more viable solutions to solve a problem. |
| **HS.IPS.3:** Integrate processes and methodologies across disciplines to incorporate multiple sources of evidence, including data generated by the student, to support defining a solution. | **HS.IPS.3a:** Use evidence and/or processes from more than one academic discipline to generate a solution to a proposed problem. |
| **HS.IPS.4:** Evaluate data analysis to determine alignment to the construct, validity and/or reliability concerns. | **HS.IPS.4a:** Use an appropriate method to analyze or compare a given set(s) of data for reliability or validity. |
| **HS.IPS.5:** Design and conduct surveys or experiments minimizing bias and defining limitations of the data set used for analysis (e.g., measurement error, sample selection). | **HS.IPS.5a:** Given a data set, design a survey or experiment which explores the limitations of that set of data. |
| Applications and Modeling | |
| **HS.AM.1:** Interpret and evaluate relationships among data sets. | **HS.AM.1a:** Interpret relationships among data sets. |
| **HS.AM.2:** Create advanced models (e.g., mathematical models, computer simulations) to represent and explain natural and designed systems, defined in course-level content standards. | **HS.AM.2a:** Create models (e.g., simple mathematical models, simple computer simulations) to represent or explain natural and designed systems, defined in course-level content standards. |
| **HS.AM.3:** Use evidence-based models to describe relationships between systems or between components of a single system. | **HS.AM.3a:** Identify the relationship between components of a single system from a teacher-provided evidence-based model. |
| **HS.AM.4:** Demonstrate the use of computational, graphical, virtual, mathematical, and/or physical modeling to identify conflicting considerations before the entire system or solution is developed. | **HS.AM.4a:** Evaluate a simple model (e.g., computational, graphical, virtual, mathematical, physical) for errors or conflicts before the final solution is determined. |

| Information and Digital Literacy | |
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| **HS.IDL.1:** Analyze tradeoffs of using a variety of tools to solve a given problem including technology. | **HS.IDL.1a:** Compare the pros and cons of two or more tools, including technology, to solve a given problem. |
| **HS.IDL.2:** Review and compile information from multiple sources, including sources generated by the student, to solve a problem. | **HS.IDL.2a:** Review and compile information from multiple sources to solve a problem. |
| **HS.IDL.3:** Evaluate the potential impact (short and/or long-term) of different technology solutions on society and the environment. | **HS.IDL.3a:** Compare how two or more technologies may affect society and the environment, both in the short term and over time. |