

Key Instructional Shifts

Academic standards provide a framework for ensuring quality teaching and learning. Recent revisions and updates to Nebraska content standards, per Nebraska Revised Statute 79-760.01, require a number of key shifts that are essential to fulfill the vision of Nebraska's College and Career Readiness (CCR) Standards for English Language Arts, Mathematics, and Science. These shifts require thoughtful changes in instruction. Practitioners must develop a deep understanding of the CCR standards as well as their implications for teaching and learning. By doing so, they equip students with the body of knowledge and skills that prepares them for success in college, career, and civic life. This document provides an overview of the key instructional shifts* in the subject areas of English Language Arts, Mathematics, and Science.

**Please note that the "key instructional shifts" outlined in this document do not reflect the full spectrum of shifts that occur as content area standards are revised. For a more comprehensive look at these shifts, please visit content area sites at <https://www.education.ne.gov/>.*

SCIENCE
Links & Resources

NDE Science
www.education.ne.gov/science

NDE Science
STEM Teaching Tools
stemteachingtools.org

National Science Teachers
Association (NSTA)
ngss.nsta.org

Nebraska Association of
Teachers of Science
neacadsci.org/nats

Next Generation Science Standards
www.nextgenscience.org/

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MATHEMATICS
Links & Resources

NDE Mathematics
www.education.ne.gov/math

National Council of Teachers of
Mathematics (NCTM)
www.nctm.org

National Council of Supervisors of
Mathematics (NCSM)
www.mathleadership.org

Nebraska Association of Teachers of
Mathematics (NATM)
www.natmathematics.org

Student Achievement Partners
achievethecore.org/category/419/the-shifts

Mathematics Common Core Standards
www.corestandards.org/Math

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ENGLISH
LANGUAGE ARTS
Links & Resources

NDE ELA
www.education.ne.gov/ela/

National Council of Teachers of
English
www2.ncte.org/

Nebraska State Reading Association
www.nereads.org/

Student Achievement Partners
achievethecore.org/category/419/the-shifts

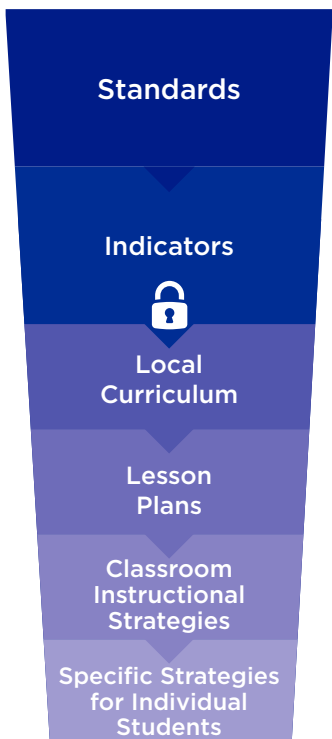
ELA Common Core Standards
www.corestandards.org/ELA-Literacy/

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Key Instructional Shifts

for Quality Implementation of Nebraska
College and Career Ready Standards



NEBRASKA
English Language Arts
STANDARDS

Speaking | Listening

Reading

Writing

English Language Arts

NEBRASKA
MATHEMATICS
STANDARDS

Number Sense

Geometry

Data Analysis

Algebra

x^2

Mathematics

NEBRASKA'S COLLEGE AND CAREER READY
STANDARDS FOR SCIENCE

SCIENCE AND
ENGINEERING
PRACTICES

DISCIPLINARY
CORE IDEAS

CROSSCUTTING
CONCEPTS

Science

English Language Arts

Adopted September 5, 2014

Instruction allows students to...	Key Instructional Shifts
Develop foundational reading skills in literary and informational text	Students must acquire a strong grounding in the elements of both literary and informational texts if they are to meet the demands of college and career. Supporting students in navigating a variety of complex, grade-level texts is essential to literacy development and success in a number of content areas and disciplines. Students should have opportunities to build their background knowledge through instructional supports and practices that include analysis and reflection.
Find and use text evidence to support analysis and reflection in reading, writing, and discussion tasks	The revised standards emphasize a suite of skills associated with drawing upon textual evidence to formulate arguments, support claims, and generate deeper understandings of content. The standards call upon students to both construct and answer literal and inferential questions that are based on substantive evidence from text, as well as analyze the nuances of print and digital texts.
Conduct and publish research using multiple credible sources	While the revised standards reflect a broad range of writing tasks and modes, they bring renewed focus to specialized research skills. Specifically, young writers are called upon to integrate multiple sources of information into their writing, evaluate the credibility and trustworthiness of such, and learn how to properly cite textual evidence and other print and digital sources. Effective writing practice in this domain creates a space for explicit instruction around the guidelines for appropriate and ethical uses of information. Effective practice also underscores the specialized skills associated with writing for various purposes and audiences across disciplines such as Mathematics, Social Studies, and Sciences.

Mathematics

Adopted September 4, 2015

Instruction allows students to...	Key Instructional Shifts
Focus on fewer concepts	The ability to focus on fewer concepts at a grade level frees up time to go into depth on concepts. Moving slower to allow for conceptual understanding leads to speed of procedural skills and fluency (Quality versus Quantity). Lessons must align to <i>grade level</i> standards, which include high quality questions and tasks.
Have the opportunity to understand mathematics through coherence	Mathematical concepts are interconnected within grade level and the following grades levels. The four mathematical processes (Problem solving, Representations, Communication and Connections) support the learning across the grades. Teacher must make connects within mathematics and cross other content areas. All students must have opportunity to exhibit mathematical processes while engaging in the content of the lesson.
Experience rigorous mathematical content	Expectations for ALL students to have deep understanding of mathematical concepts so they are able to explain why it works, demonstrate relationships between other concepts, and apply to real world situations. Teachers must believe ALL students can access learning and then use strategies that help students access the mathematics. An intentional math community must be built where it is safe to take risk by forming relationships, setting up routines and using engaging activities. Teacher must lead by example which is risk taking by letting go of control. Offer opportunity for productive struggle so students have to explain and verify their work and encourage students to talk about each other's thinking.

Science

Adopted September 8, 2017

Instruction allows students to...	Key Instructional Shifts
Apply science content knowledge through three dimensional learning. (3-D T & L)	The Disciplinary Core Ideas are the focused, limited set of science ideas necessary for ALL students to achieve scientific literacy. The Disciplinary Core Ideas , Science and Engineering Practices , and Crosscutting Concepts each build coherently K-12 to allow for deeper understanding of science concepts. When the three dimensions are integrated students gain contextual understanding of how science knowledge is acquired and applied, and how science is connected through a series of concepts, rather than memorizing facts devoid of context.
Connect ideas across science domains by explaining natural phenomena and designing solutions to real-world challenges. (integrated sci)	The Crosscutting Concepts are used to organize and make sense of Disciplinary Core Ideas . They serve as tools that bridge domain boundaries and deepen understanding of content. The Crosscutting Concepts provide structure for synthesizing knowledge from various fields into a coherent and scientifically based view of the world as students explain natural phenomena and design solutions using the Science and Engineering Practices . Natural phenomena serve as the context for the work of both scientists and engineers. In this context, science, engineering, and technology are integrated in instruction; empowering students to apply learning to their everyday lives.
Use overlapping skills to investigate, evaluate, and reason scientifically across disciplines. (interdisciplinary)	The Science and Engineering Practices are used by students to demonstrate understanding of the Disciplinary Core Ideas and Crosscutting Concepts . The Science and Engineering Practices connect science with mathematics, English Language Arts, and other disciplines through meaningful and substantive overlapping of skills and knowledge. This affords all students equitable access to learning and ensures all students are prepared for college, career, and citizenship.