Art and Science Standards

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Ten Minnesota Commitments to Equity

1. Prioritize equity.
2. Start from within.
3. Measure what matters.
4. Go local.
5. Follow the money.
6. Start early.
7. Monitor implementation of standards.
8. Value people.
9. Improve conditions for learning.
10. Give students options.

Standards Timeline

Previous Review	Implementation Year	Next Review
2006-2007	Mathematics 2010-2011	2021-2022
2016-2017	Physical Education 2020-2021	2022-2023
2017-2018	Arts 2021-2022	2027-2028
2018-2019	Science 2023-2024	2028-2029
2019-2020	Language Arts TBD	2029-2030
2010-2011	Social Studies 2013-2014	2020-2021

Arts Standards Implementation

Objectives for our time together:

1. Arts education requirements
2. Shifts
3. Standards implementation timeline

Arts Standards Implementation Basics

The Basics:

5 arts areas: dance, media arts, music, theater and/or visual arts

2008 arts standards were reviewed and revised in the 2017-18 school year.

Equity and the Arts

Creating equitable opportunities is dependent upon:

- having **inclusive** policies and practices that **represent** all students, and
- providing each student increased **access** to and creating meaningful **participation** in **high-quality** learning experiences
    - where each student realizes positive **outcomes**

Equity and the Arts – Well Rounded Education

The arts and music are included in a definition of a "well-rounded education" - a term that has replaced "core academic subjects"

2015 *Every Student Succeeds Act (ESSA)*

Arts Requirement in Statute

Minnesota Statutes, sections 120B.021 and 120B.024 require arts education be a component of comprehensive educational opportunities for all students.

Arts Requirements

Arts standards:

(7) the arts, for which statewide or locally developed academic standards apply, as determined by the school district.

Public elementary and middle schools must offer at least three and require at least two of the following four arts areas: dance; music; theater; and visual arts.

Public high schools must offer at least three and require at least one of the following five arts areas: media arts; dance; music; theater; and visual arts.

Arts Credit Requirement

- Students must complete—
  - 1.0 credit encompassing at least one of the following five arts areas: media arts; dance; music; theater; and visual arts
  - A credit is equivalent to one year of study in the arts

Arts Standards Implementation: Shift 1

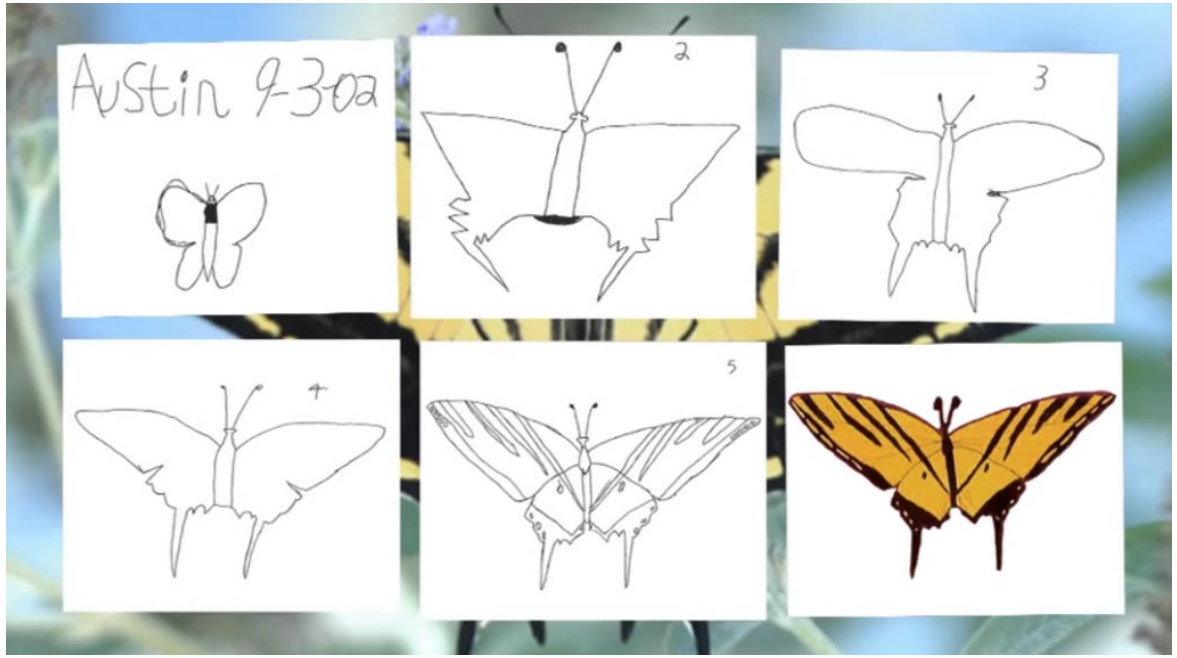
Shift from grade-banded to grade level benchmarks K-8

One grade band 9-12 for the year's worth of study in the 1 credit required for graduation

Arts Standards Implementation: Shift 2

Continued focus on process in addition to product

Foundational knowledge and skills embedded in artistic processes



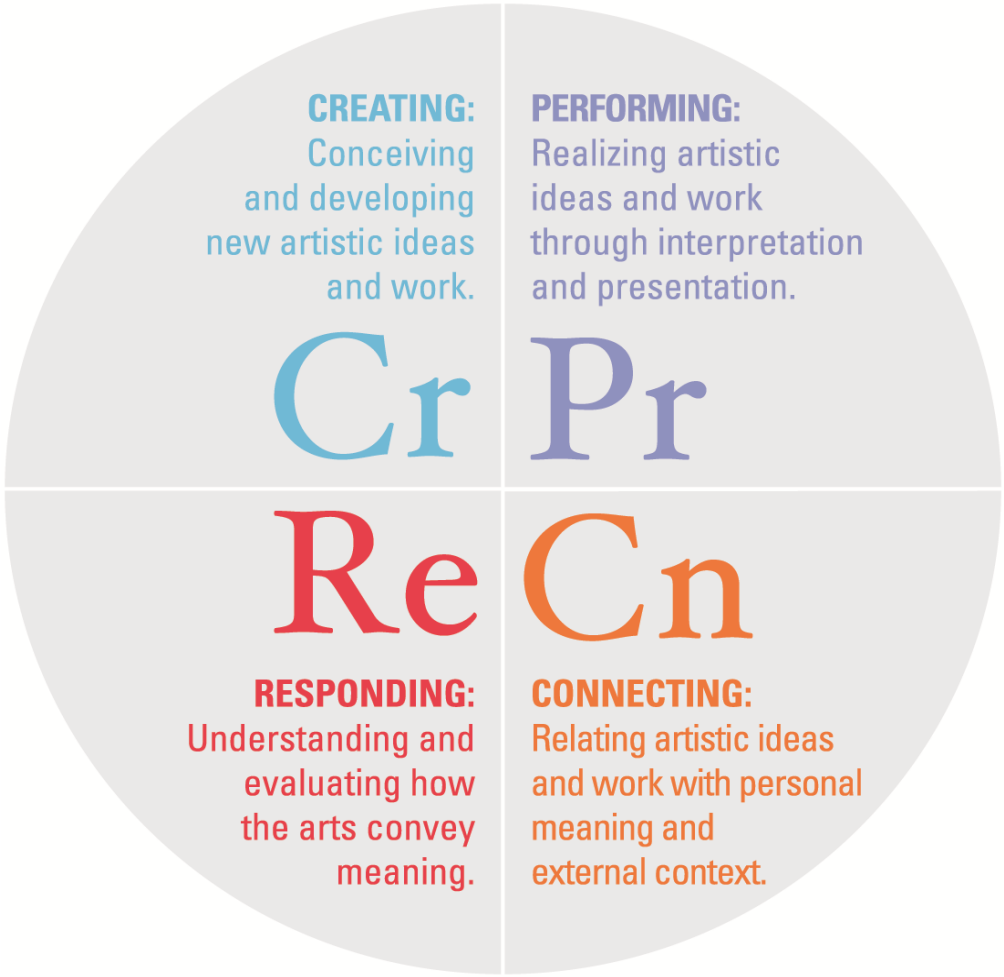
Arts Standards Implementation: Shift 3

Artistic literacy is defined in Minnesota as a combination of **foundational knowledge and skills** in an art form with the ability to work in **four processes** fundamental to the arts:

- Creating,
- Responding,
- Performing/Presenting, and
- Connecting.

Arts Standards Implementation: Shift 4

Artistic Processes
are the way the brain and body make art and define the link between art making and the learner



Arts Standards Implementation: Shifts

Anchor Standards

Foundations	1. Use foundational knowledge and skills while responding to, creating, and presenting artistic work.
Create	2. Generate and develop original artistic ideas. 3. Create original artistic work. 4. Revise and complete original artistic work.
Perform/ Present	5. Develop and refine artistic techniques and work for presentation/performance. 6. Make artistic choices in order to convey meaning through presentation/ performance.
Respond	7. Analyze and construct interpretations of artistic work. 8. Evaluate artistic work by applying criteria.
Connect	9. Integrate knowledge and personal experiences while responding to, creating, and presenting artistic work. 10. Understand that artistic works influence and are influenced by personal, societal, cultural, and historical contexts, including the contributions of Minnesota American Indian tribes and communities.

Arts Standards Implementation: Timeline

2018-19: Final Draft Standards Available

Fall 2019: Rulemaking Complete (estimate)

2018 – 2021: State, Districts, Schools, and Educators Preparing for Transition

2021-22: Full Implementation of Standards

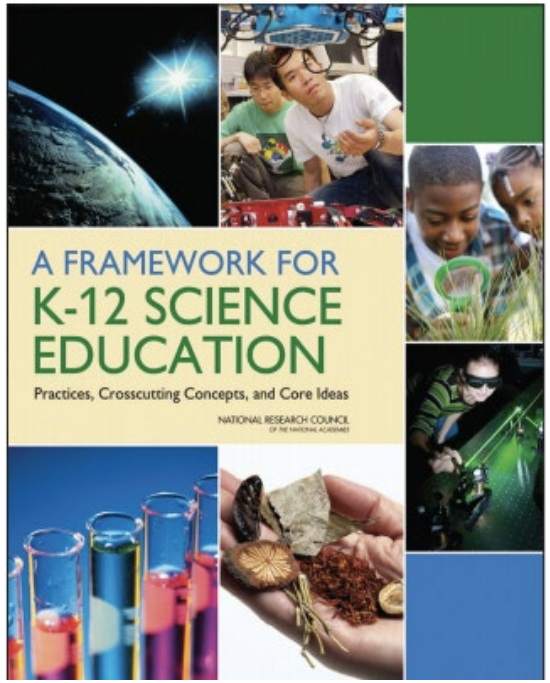
Arts Standards Implementation: Information

- Recommended Timeline
- Arts Education Requirements

Available at:
https://education.mn.gov/MDE/dse/stds/Arts/

Science Standards

Shifts in the 2019 Science Standards



Free download
at www.nap.edu

Figuring out, not just learn about

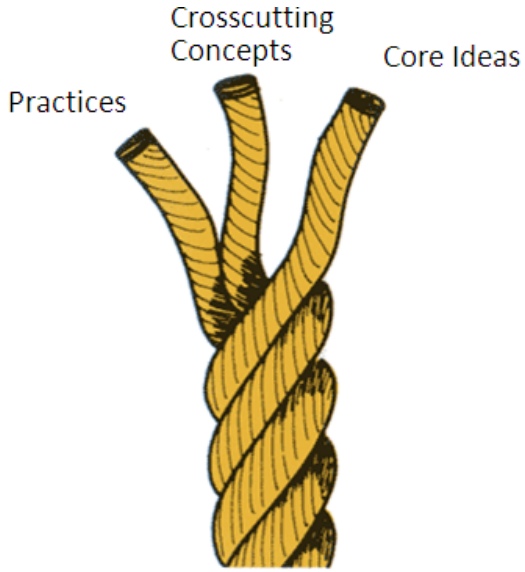
- Students explain phenomena

Three dimensions for learning

1. Scientific and Engineering Practices
2. Crosscutting Concepts
3. Core Ideas

Learning Progressions in all 3 dimensions

Focus on Equity and Identity



1. Science and Engineering Practices

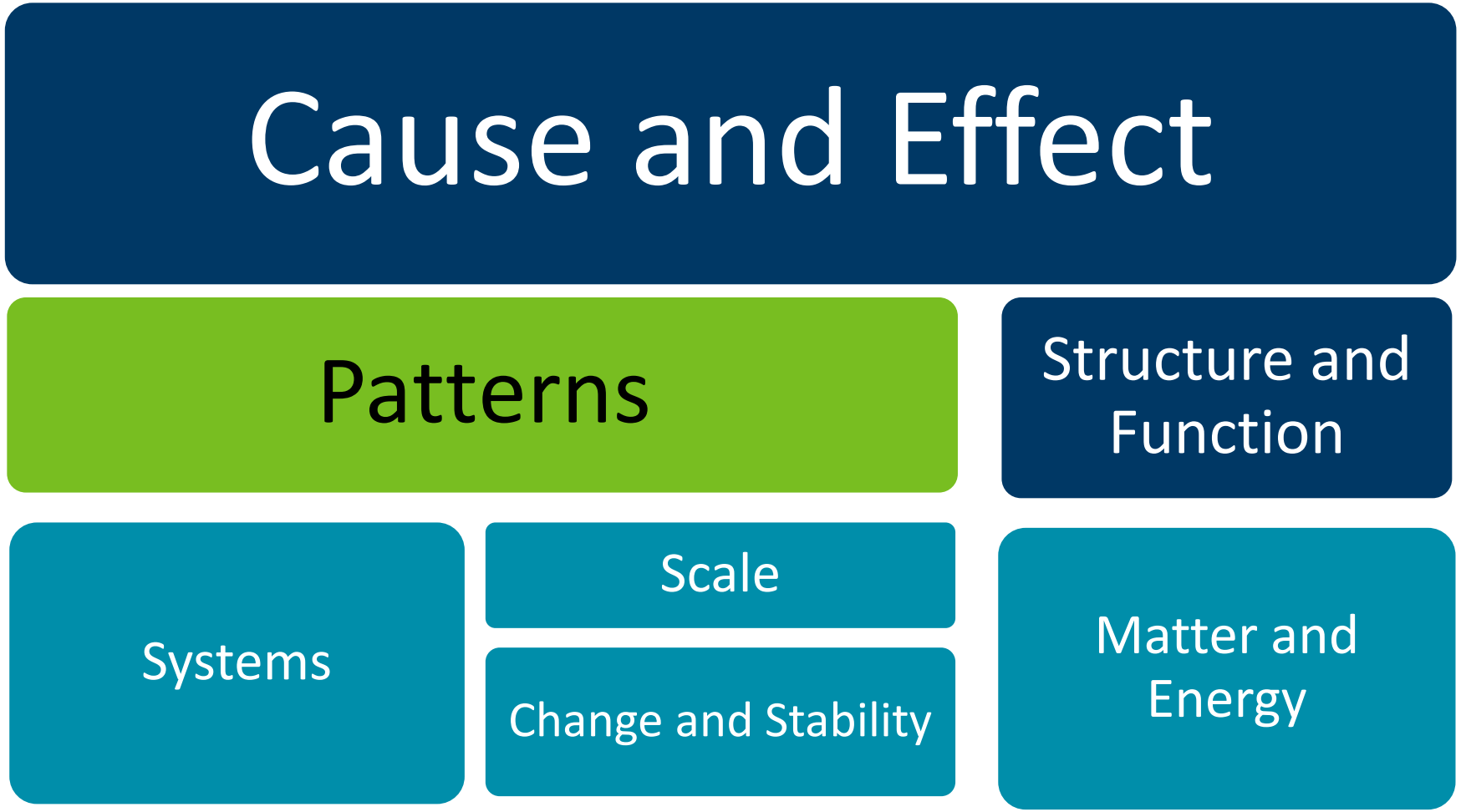
1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Developing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

Strong in current MN Standards

In MN Literacy Standards

New approaches for MN

Dimension 2: Cross Cutting Concepts



Disciplinary Core Ideas

Physical Sciences

- PS1: Matter and its interactions
- PS2: Motion and stability: Forces and interactions
- PS3: Energy
- PS4: Waves and their applications in technologies for information transfer

Life Sciences

- LS1: From molecules to organisms: Structures and processes
- LS2: Ecosystems: Interactions, energy, and dynamics
- LS3: Heredity: Inheritance and variation of traits
- LS4: Biological evolution: Unity and diversity

Earth and Space Sciences

- ESS1: Earth's place in the universe
- ESS2: Earth's systems
- ESS3: Earth and human activity

Engineering, Technology and Applications of Science

- ETS1: Engineering design
- ETS2: Links among engineering, technology, Science, and society

Standards focus on the Science and Engineering practices

Strand 1: Exploring phenomena or engineering problems

Substrand 1: Asking questions and defining problems

Standard 1: Students will be able to **ask questions about aspects of the phenomena they observe,** the conclusions they draw from their models or scientific investigations, each other's ideas, and the information they read.

Standard 2: Students will be able to **ask questions about a problem** to be solved so they can define constraints and specifications for possible solutions.*

Strand 4: Communicating reasons, arguments and ideas to others

Substrand 2: Obtaining, evaluating, and communicating information

Standard 2: Students will be able to **gather information about and communicate the methods that are used by various cultures, especially those of Minnesota American Indian Tribes and communities,** to develop explanations of phenomena and design solutions to problems.

Grade level Changes

2009 Standards

- K-5: Physical, Life and Earth Science at each grade
- 6th: Physical Science
- 7th: Life Science
- 8th: Earth and Space Science
- 9-12: Physical Science, Earth and Space Science, Life Science; Chemistry or Physics

2019 Standards

- K-5: Physical, Life and Earth Science at each grade
- 6th: Earth and Space Science
- 7th: Life Science
- 8th: Physical Science
- 9-12: Earth and Space Science, Life Science; Chemistry or Physics

Considerations

Graduation Requirements:

- 3 Credits in science including
  - 1 credit in biology
  - 1 credit in physics or chemistry (CTE may count is some cases)
- All remaining standards (Earth and Space Science)

License Implications

- For 7-12 licenses: may get flexibility for 6th grade
- For 9th grade course: may get flexibility for 9-12 who also have a 5-8 General Science license.
- 7-12 and 9-12 can add a license by passing the license exam if taught for 3 years
- 5-8 General Science license can be added by portfolio plus the exam
- Possible professional development (PD) courses aimed at adding licenses.

Implementation Timeline

Tentative recommended timeline:

- 2019 -20: Planning, Professional development about instructional strategies
- 2020-21: Curriculum and assessment planning, Continued PD

Switch to new standards in:

- 2021 – 22: K, 3, 6, 9th grade course
- 2022 – 23: 1, 4, 7, other high school courses (e.g. chemistry and physics)
- 2023 – 24: 2, 5, 8, biology

2023-24 is the full implementation year with the change in the MCA *("MCA IV in 2024")*

Sample Transition (if currently: 9th is Physical and Earth and 10 is Biology)

	2021-22	2022-23	2023-24 Full implement.	2024 - 25
6th	2019 Earth	2019 Earth	2019 Earth	2019 Earth
7th	2009 Life	2019 Life	2019 Life	2019 Life
8th	2009 Earth (MCA III)	2009 Earth (MCA III)	2019 Physical (MCA IV)	2019 Physical (MCA IV)
9th	2009 Physical + Earth	2009 Physical + Earth	2019 Earth (+ 2019 8th Physical)	2019 Earth
10th	2009 Life (MCA III)	2009 Life (MCA III)	2019 Life (MCA IV)	2019 Life (MCA IV)
11-12th	2009 Physics or Chemistry	2009 Physics or Chemistry	2019 Physics or Chemistry	2019 Physics or Chemistry

Thank you!

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