Art and Science Standards

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Ten Minnesota Commitments to Equity

1. Prioritize equity.
2. Start from within.
4. Go local.
5. Follow the money.
7. Monitor implementation of standards.
8. Value people.
10. Give students options.
<table>
<thead>
<tr>
<th>Previous Review</th>
<th>Implementation Year</th>
<th>Next Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-2017</td>
<td>Physical Education 2020-2021</td>
<td>2022-2023</td>
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<tr>
<td>2017-2018</td>
<td>Arts 2021-2022</td>
<td>2027-2028</td>
</tr>
<tr>
<td>2018-2019</td>
<td>Science 2023-2024</td>
<td>2028-2029</td>
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<tr>
<td>2019-2020</td>
<td>Language Arts TBD</td>
<td>2029-2030</td>
</tr>
<tr>
<td>2010-2011</td>
<td>Social Studies 2013-2014</td>
<td>2020-2021</td>
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</tbody>
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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.
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**
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
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.
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

<table>
<thead>
<tr>
<th>Foundations</th>
<th>1. Use foundational knowledge and skills while responding to, creating, and presenting artistic work.</th>
</tr>
</thead>
</table>
| 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/
Shifts in the 2019 Science Standards

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

Free download at www.nap.edu
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

Cause and Effect

Patterns
- Systems
- Change and Stability

Structure and Function
- Scale
- Matter and Energy
### 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
- 6<sup>th</sup>: Physical Science
- 7<sup>th</sup>: Life Science
- 8<sup>th</sup>: 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
- 6<sup>th</sup>: Earth and Space Science
- 7<sup>th</sup>: Life Science
- 8<sup>th</sup>: Physical Science
- 9-12: Earth and Space Science, Life Science; Chemistry or Physics
Graduation Requirements:

• 3 Credits in science including
  • 1 credit in biology
  • 1 credit in physics or chemistry (CTE may count in 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)

<table>
<thead>
<tr>
<th></th>
<th>2021-22</th>
<th>2022-23</th>
<th>2023-24 Full implement.</th>
<th>2024 - 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>2019 Earth</td>
<td>2019 Earth</td>
<td>2019 Earth</td>
<td>2019 Earth</td>
</tr>
<tr>
<td>7th</td>
<td>2009 Life</td>
<td>2019 Life</td>
<td>2019 Life</td>
<td>2019 Life</td>
</tr>
<tr>
<td>8th</td>
<td>2009 Earth (MCA III)</td>
<td>2009 Earth (MCA III)</td>
<td>2019 Physical (MCA IV)</td>
<td>2019 Physical (MCA IV)</td>
</tr>
<tr>
<td>10th</td>
<td>2009 Life (MCA III)</td>
<td>2009 Life (MCA III)</td>
<td>2019 Life (MCA IV)</td>
<td>2019 Life (MCA IV)</td>
</tr>
<tr>
<td>11-12th</td>
<td>2009 Physics or Chemistry</td>
<td>2009 Physics or Chemistry</td>
<td>2019 Physics or Chemistry</td>
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</tbody>
</table>
Thank you!

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