Curriculum and Instruction Committee
February 28, 2018

Attendance:

Tracy Baron	BOE Member
Rita Kennedy	BOE Member
Lisa Brady	Superintendent
Doug Berry	Asst. Superintendent
Julia Drake	Springhurst Principal
Christine Brennan	Kindergarten Teacher
Joan Kaminski	Kindergarten Teacher
Elizabeth Pinkava	First Grade Teacher

Elementary Science/Science 21

"New" New York State Science Learning Standards

- Adopted by Board of Regents - December 2016
- Based on NGSS (Next Generation Science Standards)
- Identified "Three Dimensions" for Science Education
    - Scientific and Engineering Practices
        - Scientific habits of mind
        - Inquiry and engineering design processes
    - Crosscutting Concepts
        - Physical Sciences, Life Sciences, Earth and Space, Engineering, Technology, Science Applications
    - Disciplinary Core Ideas
        - Concepts that bridge disciplinary boundaries
        - Ex. Patterns, Cause and Effect

Best Practices in Science Instruction

- Active Thinking
- Teacher Guided Inquiry
- Hands On Experiences
- Real World Connections
- True Science learning does not come from the memorization of facts

Rethinking Science Instruction
at the Elementary Level

- Alignment with NYS Science Learning Standards
- Emphasis on Investigation and Inquiry
- Balance Between Practices and Core Ideas
- Supported by Science Material Kits
- Opportunities for differentiation
- Staff Development

Science 21

- Developed through PNWBOCES
- Locally and Regionally designed "by teachers for teachers"
- Curriculum Alignment with NYSSLS
- Quality Professional Development
- Instructional Kits
- 5E Inquiry Model (Engage, Explore, Explain, Elaborate, Evaluate)
- Being redesigned over time to align with introduction of elementary Science exam

Highlights of Science 21

- Hands-on Experiences
- Focus on Guided Inquiry
- Real World Applications
- Engaging Materials
- Content Area Reading
- Supports Differentiation
- Comprehensive Assessment Packets
- Living Documents
- ELA/Math Connections

K-5 Science Instruction Bands

Kindergarten - Weather and Climate, Forces and Interactions, Interdependent Relationships in Ecosystems

Grade 1 - Space Systems, Waves (Lights and Sound), Structure (function and information processing)

Grade 2 - Properties of Matter, Earth's Systems, Interdependent relationships in Ecosystems

Grade 3 - Weather and Climate, Inheritance and Variation of Traits, Forces and Interactions, Interdependent relationships in Ecosystems

Grade 4 - Energy, Earth's Systems, Waves, Structure (function and information processing)

Grade 5 - Properties of Matter, Space Systems (Stars and the Solar System), Earth's Systems, Matter and Energy in Organisms and Ecosystems

Science 21 Rollout Timeline

2017 - 2018 Kindergarten and Grade 1

2018 - 2019 Grade 2

2019 - 2020 Grade 3

2020 - 2021 Grade 4

2021 - 2022 Grade 5 (aligns with planned introduction of new gr. 5 science exam)

*** MIddle School Science Teachers participating in 3 day curriculum alignment/development project this summer