

Science Curriculum Adoption Grades K-8

Board of Education Meeting
July 11, 2019



Science Curriculum Adoption Process

- **Science was due for an adoption this year**
 - Current curriculum not aligned to Next Generation Science Standards
 - Teachers using many different resources including on line resources
- **County training for conducting science curriculum reviews**
 - Three-day Workshop
 - Attended in February
 - Elementary and middle school principals
 - Elementary science specialists (Elena Colvin, Miranda Ford), all middle school science department teachers (Tanya Baumgardner, Kelly Stine, John Galipault, David Warner)
- **Science teachers requested materials from nine different publishers**
 - Full day review of materials in June
 - Second half day review of narrowed down materials in June, included elementary teachers (Haley Cameron - 4th grade rep and Kristen Gerding - 5th grade rep)



**FULL OPTION
SCIENCE SYSTEM™**

Reasons for the Selection of Foss

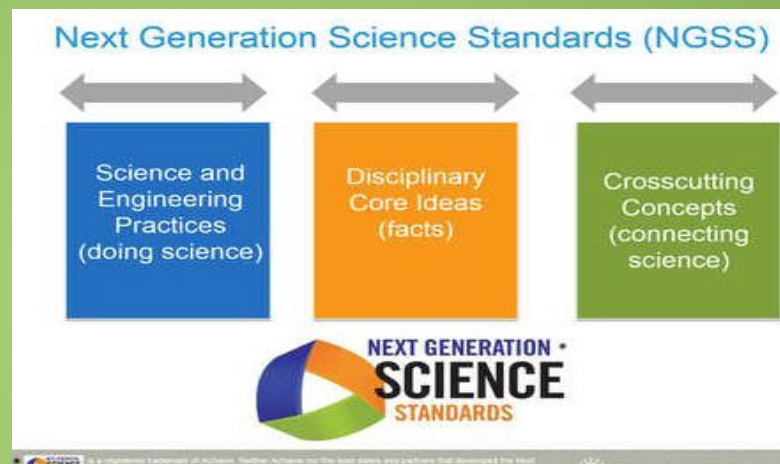
- Aligned with the NGSS (Next Generation Science Standards)
- Truly embraces the nature of NGSS and 3-Dimensional learning
- Lawrence Hall of Science has a long standing reputation with FOSS Kits - more than 25 years
- Provides clear organization and conceptual framework/flow for teachers
- Provides extensive background information, comprehensive support and online classroom management resources for teachers
- Superior content with room for our additional laboratories
- Phenomenon driven curriculum using inquiry approach to learning
- Engages all students in meaningful, active learning experiences, through dynamic and rigorous “hands on” labs and online interactive experiences
- Labs constructed to easily incorporate new technology, sensors & equipment

Reasons for the Selection of Foss (Cont.)

- Modular Units allow flexibility
- Reference texts for students - segmented for each unit.
 - Modular Student Books allow for easier transport in backpacks
- At the elementary level, advocates and guides usage of science notebooks
- Integrates robust reading and literacy strategies

Foss Program Design

- Integrates all three dimensions of the new standards -- Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts which leads to a deeper understanding of the natural and designed world.




























- Instructional model that delivers fewer science concepts in greater depth which produces much better learning than one in which many topics are covered briefly
- FOSS Next Generation** is designed to help students, over years, develop more sophisticated ways to think about the core ideas of science and engineering
- Modules are connected and build upon one another within and across each strand, progressively moving students toward the big ideas of science

Foss Units - Elementary

GRADE	PHYSICAL SCIENCE	EARTH SCIENCE	LIFE SCIENCE
5	Mixtures and Solutions	Earth and Sun	Living Systems
4	Energy	Soils, Rocks, and Landforms	Environments
3	Motion and Matter	Water and Climate	Structures of Life
2	Solids and Liquids	Pebbles, Sand and Silt	Insects and Plants
1	Sound and Light	Air and Weather	Plants and Animals
K	Materials and Motion	Trees and Weather	Animals Two by Two

Foss Units - Middle School

GRADE	INTEGRATED MIDDLE GRADES					STEM
8	  Heredity and Adaptation*	   Electromagnetic Force*	  Gravity and Kinetic Energy*	  Waves*	  Planetary Science	Variables and Design
7	   Chemical Interactions	   Earth History	   Populations and Ecosystems			
6	   Weather and Water	 Diversity of Life	 Human Systems Interactions*			

*Half-length course

 Engineering Design
  Physical Science
  Earth Science
  Life Science

Plan for Implementation

- **Science Specialist -- Grades K-3**
- **Team Teaching - Grades 4-5**
 - Two teachers at each grade level, team with a teacher who teaches math
 - Teach science and social studies in alternating units:
 - Earth science (4-6 week unit)
 - Social studies unit
 - Physical science (4-6 week unit)
 - Social studies unit
 - Life Science (4-6 week unit)
- **Middle School**
 - Grade 6 -- 2019-20 school year
 - Grade 7 -- 2020-21 school year
 - Grade 8 -- 2021-22 school year