



# Board of Education Goal

## College and Career Readiness

- ▶ Continue to align core curriculum and resources to Kansas College and Career Ready Standards. (*Social Studies, K-12; English/Language Arts, K-5; Writing, K-8; Mathematical Practice Standards, K-12; Next Generation Science Standards, K-12*)



# Elementary Science Update

November 14, 2016



# Previously

- ▶ April 2013: Next Generation Science Standards (NGSS) adopted
- ▶ 2013-14: Science Leadership Team planning
- ▶ 2014-15: Shared NGSS standards with buildings & investigated NGSS aligned instructional resources
- ▶ 2015-16: field tested 3 instructional resources



# Currently

- 21 Teachers are continuing field test
- Staff are using FOSS kits with enhancements
  - Elementary Science Course Master – on Blackboard
  - Additional add-ons to align with NGSS



# Science Leadership Team

- September – 2 field testers provided update
- October 13 – introduction and updated SLT
- November 15 – SLT and field testers



# After initial observations

- ▶ Alternatives to field tested materials
  - ▶ Discovery Education Techbooks
    - ▶ NGSS aligned
    - ▶ 15+ years LPS relationship
    - ▶ Personalized
  - ▶ Mystery Science
    - ▶ NGSS aligned
    - ▶ Engaging
    - ▶ investigative



# Our Goals

1. Alignment to the standards
2. Cultural relevancy
3. User-friendly for teachers & students
4. Aligns with the district/board goals
5. Ability to personalize and blend for our students



# Details to keep in mind

- Materials located within buildings
  - This would allow for teachers to teach units as they fit best with other curricular areas.
- Professional Development offered during the summer
  - As soon as Spring, given availability
- Every teacher teaching science standards every day.





# Secondary Science Update

# Middle School Model

## **Science domain model:**

6th - Life Science

7th - Earth Science

8th - Physical Science



## **Conceptual progression model:**

- Interdisciplinary approach
- Integrate ELA/Math standards

# Process

- ▶ Standards work
- ▶ Sequence
- ▶ Blackboard Master Course
- ▶ Implementation

# Implementation Timeline

6th - year 2  
7th - year 1  
8th - planning

Science 6 Integrated	Science 7 Integrated	Science 8 Integrated
2015-2016 Implementation	2016-2017 Implementation	2017-2018 Implementation
Cells and Organisms	Ecosystems	Natural Selection
Weather and climate	Natural resources	History of the Earth Space systems
Energy	Structure and property of matter	Waves and Electro-magnetic radiation Energy Forces and Interactions
Patterns; structure and function; systems and system models	Energy and Matter: flows, cycles, and conservation; cause and effect	Stability and change; scale, proportion and quantity

# Implementation at the High Schools

- ▶ Planning for NGSS began in the fall of 2013
- ▶ Representatives from both High Schools met during the 13-14 and 14-15 school years
- ▶ This Science Leadership Committee researched several implementation plans
- ▶ Implementation focused on two venues
  - ▶ District level content specific collaboration meetings
  - ▶ PLC meetings at each HS

# District Level Meetings

15-16 Biology Curriculum Meetings

16-17 Chemistry Curriculum Meetings

17-18 Physics Curriculum Meetings

# PLC's

- ▶ Meeting every other week during Wednesday's late arrival PLC time
- ▶ Biology, Chemistry and Physics Content Area Groups
- ▶ Focus is on implementing NGSS content standards as well as student learning

# PLC's

What do we want each student to learn?

How will we know when each student has learned it?

How will we respond when a student experiences difficulty in learning?





# NGSS Standards

Crosscutting Concepts

Disciplinary Core Ideas

Science and Engineering Practices