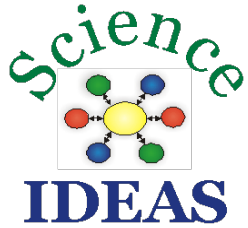


SCIENCE IDEAS MODEL SCHOOL: STRATEGIC APPROACH TO DISTRICT IMPLEMENTATION

Dr. Nancy Romance, Florida Atlantic University

Dr. Michael Vitale, East Carolina University

FOIL Meeting
Lake Mary, FL
May 16-17, 2018

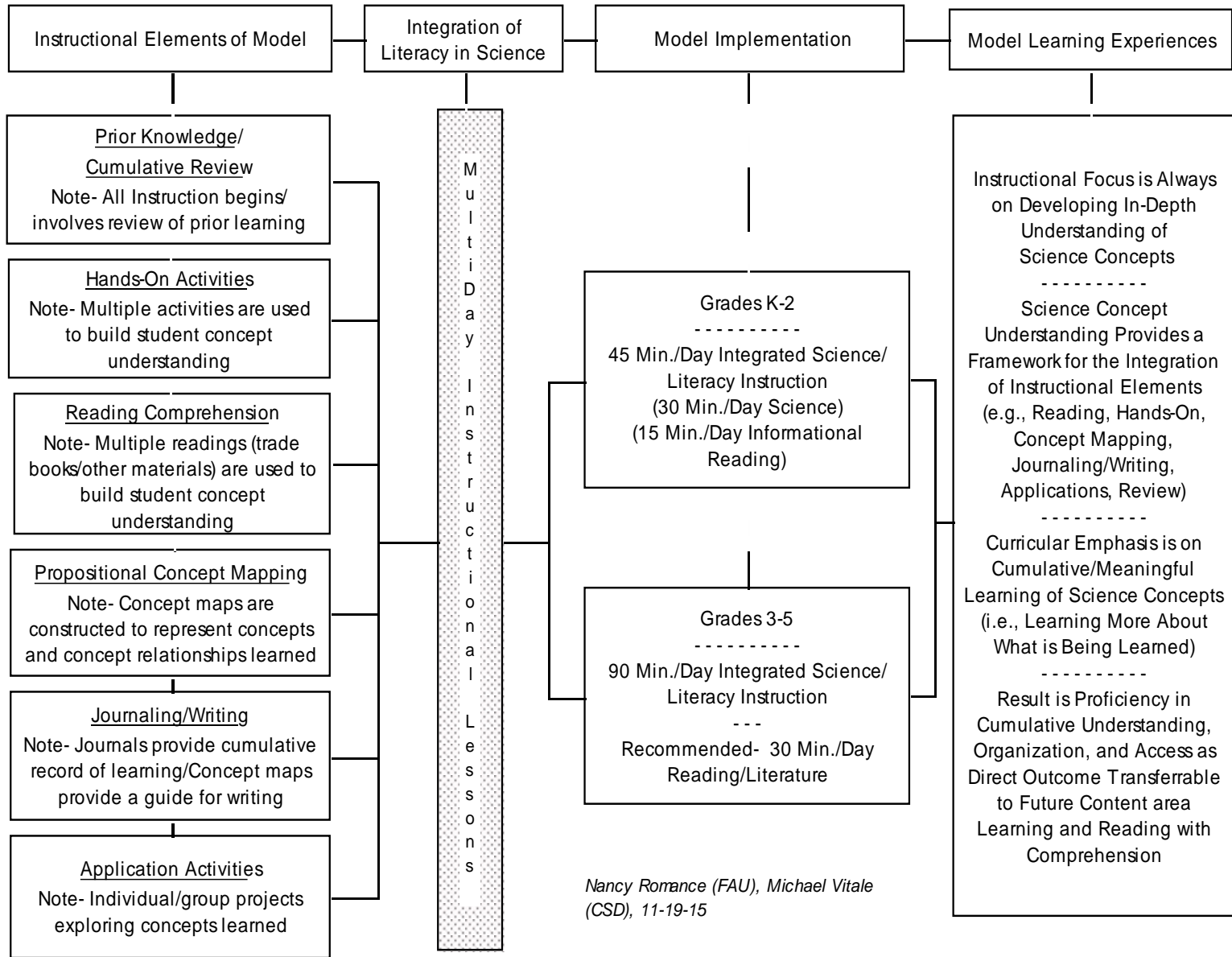


Multi-Phase Implementation of Science IDEAS Model

Considering Curriculum Policy Issues based on Research:

- importance of cumulative content-area learning to increase achievement in reading comprehension grades 1-5
- decreasing time for science as a content-domain hinders advancing reading comprehension performance for “all” students
- content learning requires changes in policy and practice as it relates to allocated instructional time for integrated science-reading-writing and less time for narrative reading or skill development without content
- grades 3-5 cumulative learning impacts middle school achievement in science and reading comprehension
- grades 1-2 results suggest the importance of early learning using integrated science-reading and writing on grade 3 achievement

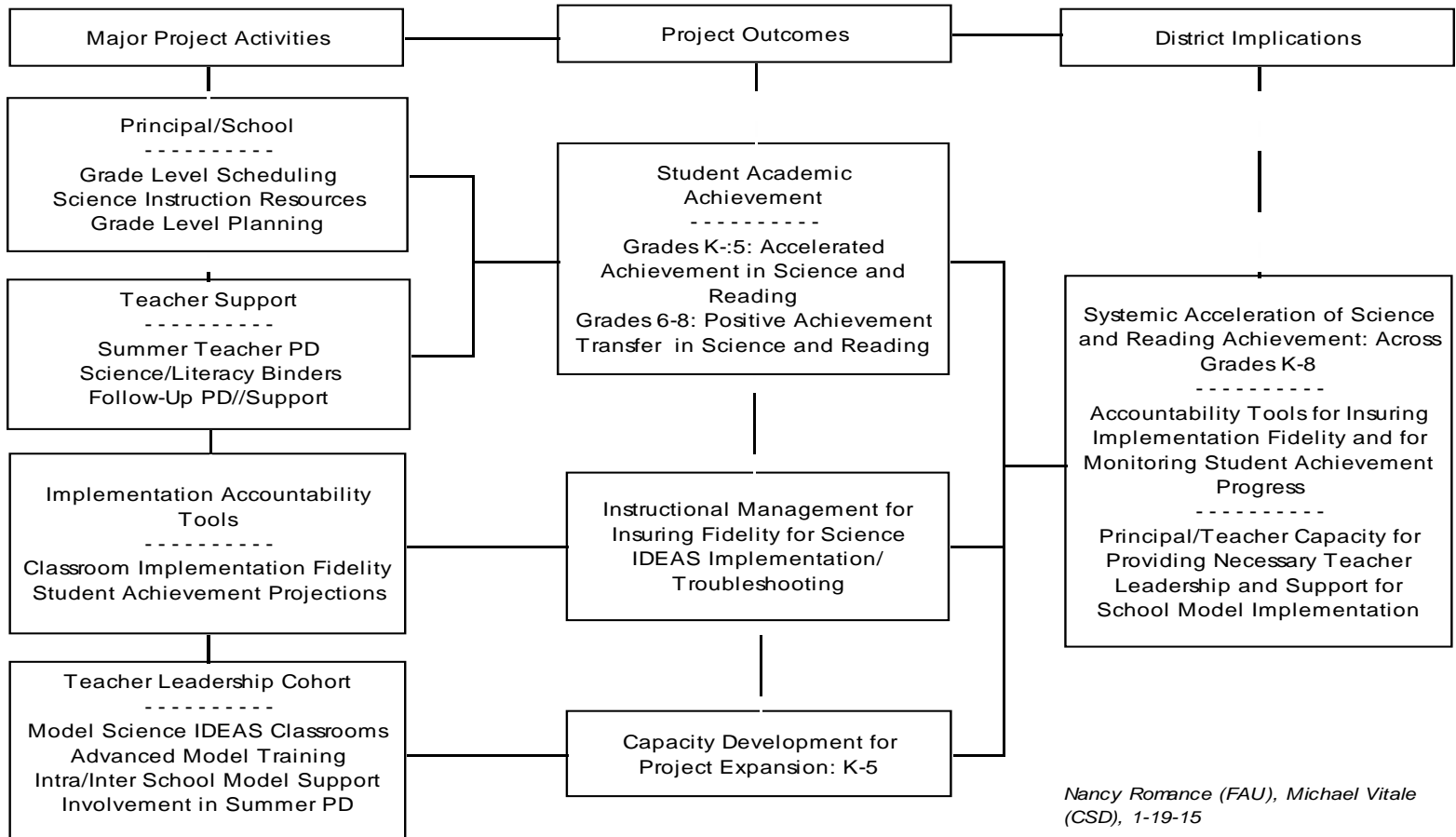
Science IDEAS Model for Integrating Literacy within In-Depth Science Instruction



Nancy Romance (FAU), Michael Vitale (CSD), 11-19-15

Science IDEAS: Model School Scale Up

Overview of Three-Year Project for Establishing Two K-5 Science IDEAS Model Elementary Schools



Nancy Romance (FAU), Michael Vitale (CSD), 1-19-15



Multi-Phase Implementation of Science IDEAS Model

Follow Evolutionary Three-Phase Process

- **Initiate – Create and Fine-Tune Start-Up Model Schools** Use schoolwide implementation in model schools for capacity development
- **Establish Sustainability of Initial Model Schools** Through teacher PD, development of a teacher leadership cadre, principal leadership, grade level planning, district/area curricular support, monitoring of implementation/achievement outcomes
- **Expand Model to New Schools** Use Model Schools and Teacher/Principal leadership and Area Administrators /District Curriculum Leadership as critical resources

Requirements for Participation

Scheduling for Science IDEAS

- a daily, 2-hour block of time for Science IDEAS
 - (hands-on science activities, reading comprehension, concept mapping, writing/journaling, science projects)
- a separate 30-minute daily block of time for literature
- eliminate student pull-outs during the Science IDEAS (e.g., ESE, SAI, ESOL/LEP)
- one full day of grade level planning with a school administrator per science unit for grades 3, 4, & 5

Requirements for Participation

Monitoring Science IDEAS Fidelity of Implementation

- Actively visit classrooms to support implementation
- Complete principal fidelity of implementation clinical judgment form
- Insure teacher completion of teacher reflection fidelity of implementation form
- Adhere to project staff fidelity of implementation schedule (classroom fidelity of implementation visits three times per year: October, January, May)
- Commitment not to adopt any other major school initiative in grades 3-5 during the initial two years of the project.

Requirements for Participation

Supporting Science IDEAS Project Implementation

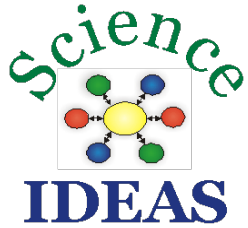
- Identify and meet regularly with a Science IDEAS coordinator at each grade level in grades 3, 4, and 5
- Insure adequate school-level instructional resources for science and reading comprehension (e.g., materials for hands-on activities, trade books and other student reading materials)
- Involve Media Specialist in the identification of unit-specific print and Internet science reading resources
- Promote the Science IDEAS project in the school via inclusion in the school newsletter, presentations at PTA and SAC meetings, and updates at faculty and grade level meetings



Multi-Phase Implementation of Science IDEAS Model

Building School Capacity and Infrastructure for Sustainability and Expansion

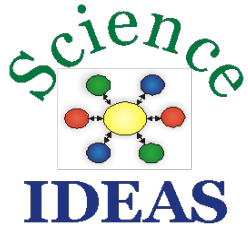
- **Specialized Teacher Expertise**
 - Development of teachers' science content understanding
 - All grades - classroom implementation of Science IDEAS model
- **Teacher Leadership Cohort**
 - Serves as in-school mentors and problem solvers
 - Organizes and delivers summer professional development institutes
 - Serves on school and district curricular committees
- **Principal Leadership for Science IDEAS**
 - Support and management of grade level curricular planning
 - Monitoring and reporting implementation fidelity



Multi-Phase Implementation of Science IDEAS Model

Building School Capacity and Infrastructure for Sustainability and Expansion (Continued)

- **District Management Capacity and Infrastructure for Science IDEAS**
 - Monitor implementation status/fidelity and multi-year student achievement trends – using a system’s approach
 - Observe Science IDEAS classrooms and participate in professional development
 - Professional development – for all new Science IDEAS Principals
 - Professional development – collaborate with District Curriculum Specialists and Area Superintendents for Curriculum and Accountability



Multi-Phase Implementation of Science IDEAS Model

Classroom Implementation Expectations

- **Students**

- Motivated and engaged in learning tasks
- Clear evidence of high quality work by all students
- Display of high level of relevant background knowledge which is applied to new learning tasks
- Enjoy reading as much as they enjoy “doing” science
- Levels the playing field for ‘all’ students – addresses **equity**

- **Teachers**

- Confidence in implementing the Science IDEAS Model
- Increased expectations about what all students can achieve
- Active engagement in curricular planning – at/across grade levels
- Encourage more in-depth classroom discussions
- Recognize model’s potential to support reading comprehension



Multi-Phase Implementation of Science IDEAS Model

Implications for Modified Accountability Practices

- **Raising Achievement Expectations through Assessment**
 - Changing the structure of grade 3-8 reading comprehension accountability assessment
 - Grades 3-8 : Focus on meaningful content-area understanding vs. “general” reading skills
 - Grades K-2 : Use nationally-normed reading tests
 - Interpret performance in grades 3-8 to projected levels of success in HS content-area courses (via achievement trajectories)
 - Emphasize NRT achievement of students in K-2 and in HS content-area courses as the focus of accountability
- **Disaggregate student performance to measure school effectiveness**
 - Students continuously enrolled K-5 or K-8
 - Students enrolled for only complete school years
 - Remaining students enrolled only for portion of school year



SCIENCE IDEAS MODEL SCHOOL: STRATEGIC
APPROACH TO DISTRICT IMPLEMENTATION

GROUP DISCUSSION

Q & A

NEXT STEPS FOR A DISTRICT